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B17/18

# TOLEDO UNIVERSITY BULLETINS

Vol. IX

DECEMBER, 1917

No. 3

## TOLEDO UNIVERSITY

*The Municipal University of Toledo, Ohio*



UNIVERSITY OF ILLINOIS  
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1917 - 1918

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# Toledo University

The Municipal University of Toledo, Ohio



## CATALOG *and* Announcements 1917-18



University Building  
Eleventh and Illinois Streets  
Toledo, Ohio

1917

## CALENDAR

1917

## JAN.

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1918

## CALENDAR

1918

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# UNIVERSITY CALENDAR.

## 1917

March	26-31	Spring vacation in day courses in all colleges except College of Pharmacy.
May	25	End of second semester of work in College of Pharmacy.
May	26	End of second semester in night courses in all Colleges.
May	30	Holiday.
June	6	End of second semester in day courses in all Colleges.
June	14	Commencement exercises.
June	21-23	Examination for entrance into the College of the University.
June	21-23	Registration of students in Summer School.
June	25	Work of Summer School begins.
July	4	Holiday.
Aug.	4	End of Summer School session.
Sept.	10-12	Examinations for entrance into Colleges of the University.
Sept.	10-11	Registration of Students in the Colleges of the University.
Sept.	12	First Semester begins in the Colleges of the University.
Sept.	15	End of official registration week.
Nov.	28-Dec. 1	Thanksgiving Recess for all Colleges.
Dec.	23	Christmas Recess for all Colleges begins.

## 1918

Jan.	7	Work resumed in all Colleges.
Jan.	26	First Semester ends in all Colleges.
Jan.	28-29	Registration of Students in all Colleges.
Jan.	30	Work of Second Semester begins in all Colleges.
Feb.	22	Holiday. Spring Vacation in Day Courses in all Colleges except College of Pharmacy <sup>1</sup> .
May	25	End of Second Semester in College of Pharmacy and in night courses in all Colleges.
May	30	Holiday.
June	8	End of Second Semester in Day Courses in all Colleges.
June	11	Commencement Exercises.

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Note—<sup>1</sup>Date to be announced during the year.



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## MUNICIPAL ADMINSTRATIVE AND LEGISLATIVE OFFICERS.

1916-1917

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HON. CHARLES M. MILROY

## CITY COUNCIL.

PHILIP HASSENZAHL, *Vice-Mayor*

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A. HOFF	R. NOWICKI
STANLEY KRYZANIAK	ALBERT H. EMCH
C. C. KILBURY	FRANK MILLER
JOHN MULHOLLAND	GUS A. HEIN
W. H. SCHEERER	JAMES W. BROWN
HARRY T. IRWIN	R. F. REDD
W. E. STARNER	E. RINALDI

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ALBERT H. MILLER	HENRY STREETMAN
GEORGE P. HAHN	EDWARD P. USHER

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HENRY STREETMAN, *Chairman.*

ALBERT H. MILLER	JOHN S. PYLE
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## Committee on Buildings and Grounds

JOHN S. PYLE, *Chairman.*

HENRY STREETMAN	EDWARD P. USHER
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## Committee on Law

GEORGE P. HAHN, *Chairman.*

JOHN S. PYLE	ALBERT H. MILLER
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## Committee on Academic Affairs

BEN W. JOHNSON, *Chairman.*

GEORGE P. HAHN	J. GAZZAM MACKENZIE
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## Committee on Professional Schools

ALBERT H. MILLER, *Chairman.*

GEORGE P. HAHN	HARRY E. MARKER
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## Committee on College of Industrial Science

J. GAZZAM MACKENZIE, *Chairman.*

HARRY E. MARKER	BEN W. JOHNSON
-----------------	----------------



## OFFICERS OF ADMINISTRATION

1916-1917

## THE UNIVERSITY

- A. MONROE STOWE, A. M., Ph. D., *President.*  
MELLIE M. SMITH, *Librarian for the University.*  
HARRY COMMAGER, LL. B., *Legal Adviser of the University.*  
GEORGE L. SHANKS, *Commissioner, Division of Purchases and Supplies.*  
JOHN J. HIGGINS, *Commissioner of Accounts.*  
LUCILLE E. MACK, *University Secretary.*  
WINIFRED A. CAIN, *University Cashier and Assistant Registrar.*  
FREDERICK H. EVANS, M. E., *Superintendent of Buildings.*

## THE COLLEGES AND COLLEGE DIVISIONS

- SCOTT L. NEARING, Ph. D., *Dean of the College of Arts and Sciences*  
A. W. TRETTEIN, Ph. D., *Acting Dean of the Teachers College.*  
ROBERT NAYLOR WHITEFORD, A. M., Ph. D., *Director of Graduate Study.*  
THOMAS L. KIBLER, Ph. D., *Dean of the College of Commerce and Business.*  
FREDERICK H. EVANS, M. E., *Dean of the College of Industrial Science.*  
AARON B. COHN, LL. B., *Dean of the College of Law.*  
WILLIAM McK. REED, Ph. G., Ph. C., *Dean of the College of Pharmacy.*  
BENJAMIN E. MALLARY, A. B., *Acting Director of Extension Division.*

## UNIVERSITY PUBLIC HEALTH LABORATORIES

- C. D. SELBY, M. D., *Director.*  
HAROLD S. COHN, M. D., *Associate Director (Serology.)*  
WILLIAM McK. REED, Ph. G., Ph. C., *Associate Director (Chemistry).*  
HOWARD WEBB, B. S., *Assistant Director (Bacteriology).*  
PAUL OER, *Assistant Bacteriological Laboratory.*  
EVA S. ROBERTSON LISTON, Ph. G., Ph. C., *Assistant Chemistry Laboratories.*  
GLADYS L. GILBERT, *Assistant in Bacteriology and Serology.*

## THE UNIVERSITY PUBLIC SERVICE BUREAU

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WILLIAM M. LEISEN, A. B., Ph. D., *Director of the Municipal Reference and Research Division.*  
ROY J. COLBERT, A. B., *Director of the Social Service Division.*  
DAVID W. HENRY, A. B., A. M., *Associate Director, Educational Efficiency Service Division.*  
JOSEPHINE LEACH, Ph. B., *Associate Director, Educational Efficiency Service Division.*  
AUGUSTUS W. TRETTEIN, Ph. D., *Director of Psychological Clinic.*

## OFFICERS OF INSTRUCTION.

1916-1917

A. MONROE STOWE, A. M., PH. D.	908 Prospect Ave.
<i>President of the University and Professor of Education.</i>	
M. ADAMYTYS	1020 Pinewood Ave.
<i>Shop Assistant.</i>	
AMELIA ARMBRUSTER	227 Fourteenth St.
<i>Instructor in Elementary Education.</i>	
GLENN D. BRADLEY, PH. D.	443 W. Bancroft St.
<i>Assistant Professor of History and Acting Professor of English.</i>	
JOHN BRANDEBERRY, B. S., A. M.	127 W. Bancroft St.
<i>Assistant Professor of Mathematics.</i>	
AARON B. COHN, LL. B.	1923 Linwood Ave.
<i>Dean of the Law College.</i>	
HAROLD S. COHN, M. D.	2046 Franklin Ave.
<i>Professor of Bacteriology and Minerology.</i>	
ROY J. COLBERT, A. B.	1724 Washington St.
<i>Instructor in Sociology.</i>	
MARGARET CUMMINGS	The Monticello
<i>Critic Teacher.</i>	
HERBERT DAVIES	1014 Grand Ave.
<i>Special Methods.</i>	
SHOLTO M. DOUGLAS	2147 Putnam St.
<i>Instructor in Law.</i>	
J. R. EMERY	121 Twenty-first St.
<i>Part-time Instructor in Physics.</i>	
LOUIS P. EPSTEIN	2210 Putnam St.
<i>Instructor in Philosophy.</i>	
FREDERICK H. EVANS, B. M. E., M. E.	1817 Lawrence Ave.
<i>Dean of the College of Industrial Science.</i>	
NETTIE FEIN	368 Nebraska Ave.
<i>Critic and Special Methods.</i>	
J. ANDERSON FITZGERALD, A., B., A. M.	
<i>Assistant Professor of Commerce.</i>	
EMIL F. FREY	2122 Michigan St.
<i>Part-time Instructor in Mathematics.</i>	
ROBERT G. GOSLINE	2505 Auburn Ave.
<i>Instructor in Law.</i>	
J. GWIAZDOWSKI	743 Palmwood Ave.
<i>Shop Assistant.</i>	--
W. GWIAZDOWSKI	7020 Pinewood Ave.
<i>Shop Assistant.</i>	
MATTIE HARVEY	2020 Jefferson Ave.
<i>Critic Teacher.</i>	

- DAVID W. HENRY, A. B., A. M. 465 Oakwood Ave.  
*Associate Professor of Education.*
- L. HUEFNER 1127 Woodland Ave.  
*Shop Assistant.*
- MARY HUTCHISON 341 W. Oakland Ave.  
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*Professor of Physics.*
- HARRY W. ISENBERG 330 Melrose Ave.  
*Instructor in Law.*
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*Special Methods.*
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- MINNIE KINKER 1242 Broadway  
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- OLON T. KLOTZ 3130 Scottwood Ave.  
*Instructor in Law.*
- J. HOWARD KRAMER 2503 Vermont Ave.  
*Instructor in Accounting.*
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*Professor of Chemistry.*
- A. NORMAN LAIRD, B. C. E., M. S. 927 Woodland Ave.  
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*Associate Professor of Elementary Education.*
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*Professor of Political Science.*
- GEORGE H. LEWIS 16 Empire Apts.  
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- ARA ROBERTSON LISTON, Ph. G., Ph. C.  
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*Professor of Economics and Sociology.*

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PAUL ORR, B. S.	<i>Instructor Physical Training.</i>	Y. M. C. A.
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ROY C. START	<i>Instructor in Materia Medica.</i>	2435 Warren St.
ARTHUR W. STUART, A. B., A. M.	<i>Part-time Instructor in Mathematics.</i>	1909 Jefferson Ave.
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A. W. TRETTIEN, B. L., Ph. D.	<i>Professor of Psychology.</i>	2208 Rosewood Ave.
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CECIL YAMPOLSKY, B. S.	<i>Assistant Professor of Biology.</i>	403 Winthrop St.

## Organization and Aims

Toledo University, the Municipal University of Toledo, Ohio, consists of six municipal colleges, is maintained by an annual levy granted by the City Council and is governed by a Board of Directors appointed by the Mayor of the city. As a municipal institution of higher learning the University has no religious or political affiliations but appeals for support and co-operation to the whole citizenship of the city.

The Board of Directors consists of nine members, three of whom are appointed by the mayor biennially for terms of six years. The Board has full charge of all University property and funds. It determines the policies of the University and elects the proper officers of administration and instruction.

That the Board recognizes that the University as a Municipal University has a service to perform for the city and its institutions as well as for the students of the University is evident from the following resolution unanimously adopted by the Board of Directors, April 5, 1916:

"WHEREAS, Toledo University, the University of the People of Toledo, exists to offer through its departments instruction and service to our city and its people as similar institutions are of service to other communities, without advocacy or partisanship of any sort, and

"WHEREAS, The University Public Health Laboratories and University Public Service Bureau have been organized to vitalize the work of instructors and advanced students and without charge to secure, organize, formulate and furnish in usable or readable form facts or scientific and technical information which may be requested by citizens, school authorities or city or other officials: therefore

"BE IT RESOLVED, By the Board of Directors of Toledo University, that the services of the University, its Departments and Bureaus are tendered to the city, its officials, its citizens and its social, educational and industrial organizations."

The admission, government, management and control of the students, courses of study, discipline and other internal affairs of the University have been delegated by the Board of Directors to the University Faculty composed of the President of the University, the Deans of the Colleges and a Faculty representative from each College Faculty.

### HISTORICAL SKETCH OF THE UNIVERSITY.

In October, 1872, Jessup W. Scott and wife conveyed to certain selected trustees one hundred and sixty acres of land near the city of Toledo for the purpose of establishing "an institution for the promotion of knowledge in the arts and trades and other related sciences by means of lectures, oral instruction, of models, and representative works of art, of cabinets, of minerals, of museums instructive of the mechanic arts, and of whatever else may serve to furnish artists and artisans with the facilities for a high culture in their respective occupations in addition to what are furnished by the public schools of the city." The institution thus provided for was incorporated as "The Toledo University of Arts and Trades," the trustees of which in 1875 established a school of design which was conducted by the University until 1886.

In 1884 the entire property included in the trust was transferred to the City of Toledo by the trustees of the Toledo University of Arts and Trades, and the Common Council of the city in accepting the trust adopted an ordinance establishing the Toledo University as the Municipal University of Toledo Ohio. From 1885 to 1906 the city through its University conducted the polytechnic school which did effective pioneer work in the field of manual and industrial training.



Toward the middle of the first decade of the twentieth century the work of the manual training school was taken over by the public schools of the city, and in accordance with the thought of the founder that the work of the University should be beyond and supplementary to the work of the public schools the University took steps to enlarge the scope of its activities. In 1904 the College of Pharmacy was established and during the next few years more or less temporary affiliations were made with a number of local professional schools. In 1909 the University was re-organized and the College of Arts and Sciences and the College of Law were established. In 1910 the College of Industrial Science was established, while in 1914 the College of Commerce and Business was organized. In 1916 the Teacher Training Work of the University was re-organized under the control of the Teachers College.

At the present time the instructional work of the University is carried on through six colleges: the College of Arts & Sciences, College of Industrial Science, College of Commerce and Business, the Teachers College, the College of Law and the College of Pharmacy.

### CLASSIFICATION OF UNIVERSITY STUDENTS.

Students admitted into the University are assigned to the College in which they desire to do the major part of their work. They are then classified as regular, special or extension students.

Extension students are students who have obtained permission of the University authorities to participate in the work of classes without credit.

Special students are students over twenty one years of age who have not officially met the entrance requirements but have given evidence that they have had sufficient preparation to successfully carry on the work of the classes in which they desire to be enrolled. Special students who have done satisfactory work in any of the college courses may become regular students by presenting evidence that they have satisfactorily completed fifteen hours of high school work or their equivalent. A record is kept of the work of special students so that if subsequently they qualify as regular students and become candidates for diplomas or degrees all work which they have completed with a grade of A or B as special students may be credited toward meeting the course of requirements of the diploma or degree for which they are candidates.

Regular students are students who have officially met the University entrance requirements and are eligible to become candidates for diplomas or degrees conferred by the University.

Students are also classified either as full time or part time students.

In the morning and early afternoon work of the University **full time students** are students who are enrolled for eleven or more hours of work during the semester while **part time students** in this work are students who are enrolled for less than eleven hours during the semester. Sixteen hours of work is the normal amount of work carried by full time students in the morning and early afternoon classes although any student who gives evidence of being able to carry additional work without sacrificing either his health or the quality of the work which he is doing may enroll for as high as eighteen semester hours.

In the late afternoon and evening work of the University **full time students** are students who are enrolled for six or more hours per semester while **part time students** in this work are enrolled for less than six semester hours. Teachers and students engaged in business are not allowed to enroll for more than six hours per semester without special permission of the Administrative Board of the College in which they are registered.

## ENTRANCE REQUIREMENTS.

The following are the entrance requirements into all of the Junior Colleges of the University unless other requirements are specifically described under the description of the work of the Colleges. Students may be admitted as regular students either by certification or by examination.

### Admission by Certification.

Students to be admitted by certification must be able to submit certificates of graduation from a first grade high school of Ohio or from a secondary school rated by the educational authorities of the state and doing the work of a first grade high school as high schools are credited by the State Department of Public Instruction in Ohio. Students desiring to be admitted by certification should fill out the blank form opposite page — of this catalogue and should mail same to the University Secretary, Toledo University, University Building, Toledo, Ohio, just as early as possible. The University secretary will then forward a blank certificate to be filled out by the high school principal or by the superintendent of schools. In each case the student will receive a certificate of admission as soon as the credentials have been passed upon.

### Admission by Examination.

Students who desire to be admitted by examination must comply with the following regulations:—

1. They must give the University Secretary written notification of the fact that they desire to be examined. Such notification should be in the hands of the University Secretary at least three weeks before the date set for the first examination. (See University calendar.)

2. In this notification the student must indicate clearly the subjects in which he wishes to be examined.

3. Students, in order to be admitted to their first entrance examination, must present themselves for examination in at least eight units of secondary school work.

4. In any subsequent examination students must present themselves for examination in at least two units of high school work.

5. In order to be admitted into any of the Junior Colleges of the University by examination the student must pass his entrance examination with a grade of at least 70%, and an average of 75% in all subjects.

## IMPORTANT NOTICE CONCERNING ADVANCED CREDIT.

After the first semester of the academic year 1917-18. no credit for work of collegiate grade will be granted.

1. Unless students have made application for advanced standing, either previous to the first semester of the academic year 1917-18 or at the time of admission into the College; or,

2. Unless the student presents credit for summer school work or for work done at any recognized institution during the academic year in which the student has not been in attendance at Toledo University, in which case application for credit should be made immediately upon return of the student to the University.

## ADMISSION TO ADVANCED STANDING.

Beginning September, 1917, applicants for admission from other institutions of collegiate rank may be admitted upon presenting in advance of registration:

1. A certificate of honorable dismissal;

2. Official transcript of credits with specifications of course, hours and grade;

3. Official statement of entrance credits and conditions, and
4. Contemporary circulars of the institution previously attended.

Application for admission to advanced standing should be addressed to the University Secretary, University Building, Eleventh and Illinois streets.

### RESIDENT WORK REQUIRED FOR DIPLOMA OR DEGREE.

At least thirty semester hours of credit must be earned in residence in this University before the student may become a candidate for any degree or diploma conferred by the University.

### PHYSICAL TRAINING.

Arrangements have been made with the Y. M. C. A. and the Y. W. C. A. whereby students may enter University classes in physical training Tuesday afternoon. In the case of the young women, the fee for this work is \$3 per year, while in the case of the young men the fee is \$4 per semester and entitles the young men to all of the swimming pool and gymnasium privileges of the Y. M. C. A.

### LIBRARY FACILITIES.

There is a library at the University in which will be found the books immediately pertaining to the work of the various Departments and Colleges. The Toledo Public Library, situated a short distance from the University, offers additional facilities for research and reference. Students also have access to the library files of the Municipal Reference and Research Division of the University Public Service Bureau.

### FEES.

The following table gives the semester fees which must be paid before registering by residents of Toledo and by sons and daughters of residents of Toledo:

#### UNIVERSITY SEMESTER FEES.

University Registration Fee.....	\$ 2.00
Laboratory Fees, per course.....	3.00
Gymnasium Fees, Men.....	4.00
Law Collegiate Tuition Fees, per course.....	5.00
Pharmacy College, Tuition Fees.....	28.00
Pharmacy College, Laboratory Fees.....	2.00
Shop Fees, per shop course.....	5.50
Diploma Fee*.....	5.00

*\*This fee must be paid by students before registering for the semester in which he intends to become a candidate for degree or diploma. In the event the student fails to complete the requirements the diploma fee will be refunded.*

### Important Notice.

A definite time before each new semester or term of work is begun is set aside as registration week. This time is announced either in the University calendar or in special announcements. For students who fail to register during this time specifically set aside for registration, the University semester registration fee is \$3.00.

## HOW TO REGISTER.

### Directions to Students.

If you were enrolled in University classes last year

1. Secure resigstration blanks from the attendant in room 102.
2. Fill in all blanks, indicating courses you desire to take by Department and number. e. g. History 112.
3. If you plan to take more than two courses, take your card to the office of the Dean of the College in which you belong for the signature of the Dean or Director.

4. Take registration cards to the office and pay semester fees.
5. Attend first meetings of classes for which you have been registered. If at roll-call your name is not called the second meeting of the class you attend, report the fact to the office.

If you did not attend the University last year

1. Secure application for admission card from the attendant in room 108 and fill in blanks on card.
2. Secure registration blanks from attendant in room 102.
3. Fill in all blanks, indicating courses you desire to take by Department and number. e. g. History 112.
4. Take application for admission card and registration card to the office of the Dean of the College in which the major part of the work you desire to take is offered for the signature of the Dean or Director.

5. Take application for admission card and registration card to the office, room 107, and pay semester fees.

6. Attend first meetings of classes for which you have been registered. If at roll-call your name is not called the second meeting of the class you attend report the fact to the office.

## CHANGES IN REGISTRATION.

After a student has been registered no changes will be allowed without the consent of the Dean of the College in which the students is registered. Requests for such consent must be in the prescribed form of petition endorsed by the Instructors of the courses involved.

## CLASS ROUTINE AND SCHOLASTIC REQUIREMENTS.

### Absences.

Any student whose absences exceed four meetings of the class in the aggregate in the course will not receive credit in the course unless the student receives permission from the Administrative Board of the College in which the work is offered to substitute work for that semester in class. Such permission is granted only upon recommendation of the instructors concerned.

### Semester Hour.

The unit in reckoning requirements for degrees and diplomas is a semester hour equivalent to one fifty-minute exercise per week for the semester and requiring for preparation approximately two hours for each exercise.

### Grades.

The student's grade is based upon class work and any tests or examinations given in the course. Three passing grades are given, namely A, B and C. Work not done satisfactorily is marked D (incomplete) or E (failure). An incomplete must be removed before the close of the following semester. Otherwise it becomes a failure. To remove a failure it is necessary to satisfactorily complete the work of the course in class. The grade X indicates that the student has been allowed to participate in the work without credit.



# Descriptive Catalog of Courses Offered by the Departments of Toledo University

## WHAT THE COURSE NUMBERS INDICATE.

The digit on the left indicates the college offering the course.

1. Indicates the College of Arts and Sciences, e. g. Bacteriology 132.
2. Indicates the Teachers' College, e. g. History 235.
3. Indicates the College of Commerce and Business. Commerce 321.
4. Indicates the Junior Engineering College Division of College of Industrial Science.
5. Indicates the Industrial Division of College of Industrial Science.
6. Indicates College of Law.

The next digit indicates the year for which the course is planned.

1. Designates courses planned for Freshmen.
2. Designates courses planned for Sophomores.
3. Designates courses planned for Juniors.
4. Designates courses planned for Seniors.

## ACCOUNTING.

### Accounting 311-312. Elementary Accounting. 6 hrs.

A preparatory course designed to give the student a thorough understanding of the methods employed in recording the debit and credit transactions of business concerns. The work covers both the single and double entry form of accounts as applied to the proprietor, the partnership, and the corporation forms of business. Careful training will be given in the opening and closing of books, classification of accounts, preparation of balance sheets and profit and loss statements, valuation of assets and inventories, depreciation, sinking funds, reserve accounts, capital and revenue expenditures, and forms of reports and statements.

### Accounting 313. Business Mathematics 2 hrs.

Review of principles with practical applications to calculations involving interest, annuities, amortization, depreciation and sinking funds, stocks and bonds, corporation taxes, etc.

### Accounting 321-322 General Accounting 6 hrs.

The theory and practice of higher accounting. The subject will be treated by lectures, assigned readings and problems. The principles of accounting will be adapted to the various forms of business organizations. The following subjects will be considered: Revenue accounts, depreciation, sinking funds, reserves, income accounts, liabilities, methods of liquidation, balance sheets, and inventories.

### Accounting 331-332 Advanced Accounting 5 hrs.

A course in the advanced theory and practice of accounting designed for those preparing for the C. P. A. examination. Raw material, including a number of C. P. A. problems, illustrative of the various practical problems that are confronted by the accountant, will be assigned for home study and class report. Only those students who have completed Accounting 321-322 or its equivalent will be admitted to this class.



**BACTERIOLOGY.**

Mr. Harold Cohn.

**Bacteriology 131. General Bacteriology 4 hrs.**

This course includes the study of the morphology and biology of bacteria; the cultivation and separation of bacteria; staining and microscopic study of bacteria found in air, soil, milk, water, and the study of bacteria found in the common diseases.

**Bacteriology 132. Advanced Bacteriology 4 hrs.**

In this course the special bacteriological methods and the bacteria of all diseases are studied. It includes the cultivation, isolation, and differentiation of bacteria; the relation of bacteria to disease; the study of the toxins, antitoxins and vaccines and the problems of immunity.

**BANKING.**

Mr. Fitzgerald.

Mr. Kibler.

**Banking 321. Money and Currency 3 hrs.**

The fundamental principles of money are developed from a study of the functions of money, kinds of money, coinage, monetary standards, legal tender, credit, elastic currency, deposit currency, relation of money to prices, and the relation between foreign and domestic exchange, and commerce.

**Banking 322. Banking and Credit 3 hrs.**

The organization and operation of banking systems. The course includes a review of the banking history of the United States with special attention to systems operating under federal and state governments, and considers the bank statement, banking functions, administration of loans and discounts, collections, clearing houses, etc.

**Banking 323. Insurance 3 hrs.**

The functions and underlying principles of insurance; life insurance—kinds of companies, their organization and operation, the important features of various policies, the calculation of premiums, the handling of reserves, and the conservation of health; fire insurance—methods of operation of different kinds of companies, inspection bureaus, underwriters' laboratories, the determination of rates, interpretation of the standard contract and amendatory clauses; state regulation.

**Banking 324. Credits and Collections 3 hrs.**

The organization and operation of the credit departments of wholesale and retail mercantile establishments. The class will study methods employed by the leading credit agencies as well as the national and local associations of credit men in ascertaining and dispensing credit information, and the use to which such information is put.

**Banking 326 The Customer's Use of a Bank 2 hrs.**

The services which banking institutions render to the individual or corporation and the methods by which these services are actually utilized by business men.

**Banking 332. Foreign Exchange 2 hrs.**

The principles and practice of foreign exchange. Among the subjects considered are the following: Methods of making and collecting payments for trade, banking, or other purposes, with exercises in the problems of exchange practice.

**BIOLOGY.**

Mr. Yampolsky.

**Biology 121. Nature and Development of Plants 3 hrs.**

A study of the plant in relation to its environment, evolution of structure and function. Types are selected from the lowest through the highest forms in the plant kingdom.

First semester. Lectures 2 hrs. Quiz 1 hr.

**Biology 123.** Laboratory work to accompany Biology 121 2 hrs.

**Biology 122.** General Zoology 3 hrs.

An introductory course dealing with a comparative study of animals in relation to environment, evolution of structure and function. Types are selected from the lowest through the highest forms in the animal kingdom.

Second semester. Lectures 2 hrs. Quiz 1 hr.

**Biology 124.** Laboratory work to accompany Biology 122 2 hrs.

**Biology 131.** Invertebrate Zoology 2 hrs.

Laboratory.

First semester. Prerequisite Biology 122-124.

**Biology 133.** Laboratory work to accompany Biology 131. 2 hrs.

**Biology 132.** Plant Physiology 3 hrs.

Lectures. Physiology of nutrition, growth, reproduction and irritability of the plant.

Second semester. Prerequisite Biology 121-123.

**Biology 134.** Laboratory work to accompany Biology 122 3 hrs.

**Biology 135.** Human Physiology 2 hrs.

This course includes the study of the macroscopic, microscopic and chemical composition of the tissues of the body; the study of nutrition, digestion and respiration; the physiology of circulations and the nervous system. The study of the special senses. The course includes demonstrations and experiments.

**Biology 141-142.** Cytology 2 hrs.

Study in nutrition, irritability and reproduction of the cell. Lectures. Throughout year. Prerequisite, Biology 122, 124, 131, 133.

**Biology 143-144.** Laboratory work to accompany Biology 141-142 3 hrs.

### **Journal Club**

For the review of current biological literature.

**Biology 701-702.** Human Physiology. 2 hrs.

These courses comprise the study of the chemical macroscopical and microscopical composition of the tissues in the human body. They embrace the study of locomotion, nutrition, digestion, respiration, and circulation. They include also the physiology of the nervous system and the special senses. A number of hours are devoted to demonstrations and experiments.

**Biology 703.** Plant Histology 2 hrs.

A microscopic study of the tissues of seed plants, especially medicinal plants. Structure of cell and cellular contents are considered. Lecture and laboratory.

Second semester. Intended for Pharmacy Students.

## **BUSINESS ADMINISTRATION.**

Mr. Kibler

Mr. Fitzgerald

**Business Administration 313.** 3 hrs.

### **History of Commerce.**

The development of world commerce, commercial policies, highways of trade, commercial science, trade tariffs, and the extent and character of the imports and exports of the leading commercial nations.

**Business Administration 314.** 3 hrs.

### **Economic Resources.**

Our natural resources, their location, extent, development, and importance in domestic and foreign industry and trade.

**Business Administration 321.****3 hrs****American Industry.**

Development of manufactures; resources, territories, and industries; domestic and foreign trade with special reference to South American and European trade opportunities; consideration of power resources with respect to availability, expense and conservation.

**Business Administration 322.****3 hrs.****Business Organization and Management**

A study of types of business organization, principles of location, and the internal management of a large business. Some of the topics studied are the functions and methods of the various departments, as purchasing, production, cost accounting, selling, credit, and traffic; systems of managing and paying labor; and the manager's use of statistical information. The student is led to recognized principles by his study of actual cases in commerce and industry.

**Business Administration 323-324.****4 hrs.****Business Law.**

A general course covering common business transactions involving contracts, agency, insurance, bailments, bankruptcy, insolvency, partnerships and corporations.

**Business Administration 335.****2 hrs.****Corporation Finance.**

Corporations are studied from the point of view of their financial organization and management. General features of the course are the nature and characteristics of corporations; their formation and promotion; kinds of securities; management of sinking funds, refunding operations, and profits; reorganizations; and federal and state control. Corporate reports are analyzed, and the individual's study of leading corporations is required.

**Business Administration 336.****2 hrs.****Industrial Management.**

The line, line and staff and functional systems of management will be studied to ascertain the relative merits of each. The following phases of management will be considered: Standardization; measurements; records and programs; instruction; incentives; classification, codification and symbolization of factors and functions; graphic methods; the Taylor system; methods of wage payment; motion study.

**CHEMISTRY.****Mr. Kreider****Mr. Myers****Mr. Reed****Chemistry 101-102. Introduction to Inorganic Chemistry.****4 hrs.**

These courses are intended for those students who are beginning the study of the science. The lectures freely illustrated by experiments. The work in the laboratory is of such a nature as to acquaint the student with the fundamental laws and theories of chemistry.

**Chemistry 103-104.****Laboratory****4 hrs.****To accompany Chemistry 101-102.****Chemistry 105.****2 hrs.****Popular Course in Elementary Chemistry.**

In this course the most common elements and compounds are studied. A large number of experiments are performed to demonstrate the chemical properties of the ordinary things about us and the reactions which they undergo. The laboratory work which the student is ordinarily required to perform is, in this course, performed by demonstration during the lectures. The aim here is to give a popular course in the chemistry of every day life, and to aid the student in acquiring the maximum amount of information in the shortest time possible.

- Chemistry 111. General Chemistry 3 hrs.**  
This course is intended to teach the student the fundamental principles of the science. It deals with the non-metals, their relations and reactions. The physico-chemical laws are emphasized. About two hundred experiments are performed and results recorded in note books.
- Chemistry 112. General Chemistry. 3 hrs**  
The class work is given to the study of the metals, their classification, compounds, and chemical properties, the processes of analysis and reactions. The laboratory work consists in the analysis of the solutions of metals and acids, and the dry mixtures of salts, oxides, alloys and minerals. Prerequisite Chemistry 111.
- Chemistry 113-114. Laboratory. 4 hrs.**  
To accompany Chemistry 111-112.
- Chemistry 121. Quantitative Analysis. 1 hr.**  
The simple gravimetric methods are applied in the laboratory. This is followed by electro-analysis and a number of volumetric determinations. Prerequisite Chemistry 112.
- Chemistry 122. Quantitative Analysis. 2 hrs.**  
A continuation of volumetric determinations. The principles of analysis are applied to a large number of industrial products.
- Chemistry 123-124. Laboratory. 7 hrs.**  
To accompany Chemistry 121-122.
- Chemistry 131. Organic Chemistry. 2 hrs.**  
The student becomes acquainted, in the laboratory, with the methods involved in organic work, such as fractional distillation, crystallization, extraction, determinatives of melting and boiling points, and the preparation of typical compounds. Prerequisite Chemistry 111-112.
- Chemistry 132. Organic Chemistry. 2 hrs.**  
Continuation of 131. Preparations, reactions and analysis.
- Chemistry 133-134. Laboratory. 4 hrs.**  
To accompany Chemistry 131-132.
- Chemistry 141. Advanced General Chemistry. 2 hrs.**  
This course deals with the most advanced phases of General Chemistry. Many compounds which were not previously treated are here studied, together with physical chemical problems.
- Chemistry 141-142. Advanced General Chemistry. 2 hrs.**  
A continuation of Chemistry 141.
- Chemistry 701-702. Elementary Chemistry. 2 hrs.**  
This course will begin with a consideration of the elementary outlines of physics and its relation to the successful study of modern chemistry. Following this the subjects directly relating to Chemistry, will be taken under the head of Laws of Combination in definite and multiple proportions, atomic theory, atomic weights, names of elements; beginning with elementary gases, and studying these as to appearance, preparation, physical properties, medicinal properties, etc., including the entire chemistry of the elements and their compounds.
- Chemistry 703-704. Laboratory Courses 4 hrs.**  
The above work will be greatly simplified and aided by our laboratory course, which follows each recitation and supplies the practical aid to theoretical teaching. In this course the student is furnished a complete set of apparatus and is required to complete a set of laboratory manuals, covering every phase of laboratory work, viz.: the making of the gases, oxygen, hydrogen, chlorine, nitrogen, etc., the synthesis of several products, as ferrous sulphide, calcium chloride, ammonia gas, etc., the analysis of a salt of each of the important metals. Thus enabling the student to determine readily the identity of a compound, the impurities that he might suspect it to contain, and finally, a general resume of the work of the year, both theoretical and practical. Text-Book, Sadtler's Pharmaceutical and Medical Chemistry.



**Chemistry 731-732.****Organic Chemistry.****4 hrs.**

The motto of this course is "Think Chemistry." Too often students in chemistry become mere scrap books of pasted formulas and equations. The Senior student will be urged to think his way into organic chemistry, the chemistry of the elements and combinations that are found in the vegetable and animal world. The classification of Simon is followed in the main, and such supplementary work as may be necessary to give the student not only the names of Hydrocarbons, Alcohols, Ethers, Organic Acids, Nitrogen Compounds, etc., but a clear reason for such names and methods of division.

Twelve to fourteen weeks complete this didactic course, when the student is usually sufficiently grounded to enter upon the study of analytical and clinical methods, drug proving, urinalysis, etc. A laboratory course accompanies the book and lecture work in organic compounds. The student is given opportunity to examine the various organics; to make, test, decompose or convert the same by practical methods.

Text-Book, Simon's Pharmaceutical and Medical Chemistry.

**CIVIL ENGINEERING.**

Mr. Evans

Mr. Laird

**Civil Engineering 421. Surveying and Plotting.****5 hrs.**

The theory of plane surveying is studied and the manipulation and use of instruments to carry out the operations in the field is taught. The theory is supplemented by problems to emphasize and impress upon the student the application of the theory to practical problems.

**Civil Engineering 422. Topographical Surveying.****3 hrs.**

Pre-requisite Civil Engineering 421. A study in the class room and field of the theory and practice of topographical surveying and a brief consideration of its practical application in the field of engineering.

**Civil Engineering 423. Surveying and Plotting.****2 hrs.**

A course for Mechanical and Electrical Engineering students in the manipulation and use of surveying instruments.

**Civil Engineering 424. Railroad Surveying.****4 hrs.**

Pre-requisite Civil Engineering 421.

A study of the theory and practice of railroad surveying, including the preliminary and final locations. Special consideration is given to the economic location with reference to construction cost. Class room work is supplemented by practical problems to illustrate the various phases of railroad location.

**Civil Engineering 425-426. Topographical Drawing.****2 hrs.**

A study of the various topographical signs used in topographical map making. The course includes the preparation of a series of plates using these signs and in addition some of the surveys made in Courses 421 and 422 are mapped. Each student must be able to describe from a study of a topographical map the topography of a country.

**Civil Engineering 427-428. Descriptive Geometry.****4 hrs.**

A thorough course in descriptive geometry, the solution of problems dealing with the point, line and plane; and surfaces of revolution. Practical problems solved by the use of descriptive geometry.

**ECONOMICS.**

Mr. Nearing

Mr. Kibler

**Economics 111.****Modern Economic Problems.****2 hrs.**

A general discussion of the more pressing economic problems, including the cost of living, the standard of living, wages, immigration, industrial risks, and unemployment. The course is designed to interest beginners in the more familiar economic questions of the day.



**Economics 112. The Industrial System. 2 hrs.**

The industrial system is the most prominent among the modern social institutions. Its influence is widespread, and its ramifications extend to every individual and every social organization in the community. Like previous economic systems, the industrial system is the product of an evolutionary process. The greater portion of the course is devoted to a discussion of industrial evolution and to the development of large scale industry.

**Economics 121. Principles of Political Economy. 2 hrs.**

Economic thinkers have established certain principles regarding the production or making of wealth; the consumption of wealth; and the distribution or apportionment of values created in the industrial system. The course is designed to familiarize the student with the most modern statements of these economic theories.

**Economics 122. Monopolies and Trusts. 2 hrs.**

No economic development of the last generation has attracted more widespread attention than the growth of monopolies and trusts. The nature of monopoly power in modern industry, and the methods of securing monopoly control are analyzed and explained. A study is made of the state and federal laws and court decisions, which have accompanied the movement for the regulation of trusts.

**Economics 131. Wage Theories. 2 hrs.**

The wage relation has always attracted the attention of economists. The classical economists presented a well defined wage theory. This theory has been modified substantially by later 19th century economists; it has been seriously questioned by a number of the more radical writers, and at the present time a new attitude toward wages has found its expression in the movement for the minimum wage.

**Economics 132. Labor Problems. 2 hrs.**

A course designed to include the discussion of the chief questions that arise in the organization of labor; in the relations between labor and capital; and in the work that the laborer is called upon to do in the modern factory or shop. Comment will be made on some of the more recent industrial conflicts.

**Economics 141. Interpretation of Social Facts. 2 hrs.**

The course is designed to train students in the use of social facts. Social workers everywhere are being called upon to state their problems with such clearness that the laymen can understand their significance. The principles of statistical theory are discussed, and a number of practical problems in the presentation and analysis of economic facts are analyzed.

**Economics 142. History of Economic Thought. 2 hrs.**

The advanced student of economics should have a background in the history of economic thought. The course is designed to familiarize the student with the pre-classical economic theories; with the theories developed by the classicists in the 18th and 19th centuries, and to consider the modifications in economic theory which have occurred during the last twenty years. (Omitted 1916-1917.)

**Economics 149. Social Science Seminar. 2 hrs.**

All thesis students are required to attend the Social Science Seminar, to present their thesis for criticism and suggestion.

**Economics 311-312. Introduction to Economic Science. 6 hrs.**

An introductory course describing the development of economic life and the evolution of present day industrial problems. Discussion of tariff, trusts, public utilities, money and banking, land and labor problems, and the relation of these to the organization of production and distribution of wealth.

**EDUCATION.**

Mr. Stowe.

Mr. Henry.

**Education 111. Principles of Human Behavior. 2 hrs.**

Aim: To help the students discover how and why they behave as they do, so that they may more intelligently influence the behavior of others as well as more effectively control their conduct.

**Education 112. College and University Education. 2 hrs.**

A comparative historical and psychological study of college and university education with a view of helping students orient themselves in college and discover the value of the various studies of the college curriculum. Attention is given to the discussion of some of the most important problems which confront college men and women.

**Education 211. Principles of Human Behavior. 2 hrs.**

Aim: To help the students to discover how and why they behave as they do, so that they may more intelligently influence the behavior of others as well as more effectively control their own conduct. Special emphasis will be placed upon those principles of human behavior, a practical knowledge of which is important to teachers.

**Education 212. Modern Educational Problems. 2 hrs.**

This course is devoted to a discussion of the big educational problems confronting our schools and our teachers. For the greater part of the course the point of view will be that of the intelligent educational layman. The course also aims to prevent a waste of energy on the part of the young teacher by setting forth a systematic and comprehensive view (1) of the tasks that are to be accomplished by the school and (2) of the working principles for the attainment of the end.

**Education 213. Principles of Human Behavior. 2 hrs.**

This course aims to help students discover how and why they behave as they do, so that they may more intelligently influence the behavior of others as well as more effectively control their own conduct. Special attention will be given to those principles of human behavior which will be of assistance to students in their endeavors to increase their efficiency as students.

**Education 214. College and University Education. 2 hrs.**

The course will be devoted to a comparative historical and psychological study of college and university education, the aim of which will be (1) to help students orient themselves in college, (2) to discover the value of the various studies of the college curriculum and (3) to appreciate the ideals and work of professional schools for the training of teachers.

**Education 221. Child Study. 2 hrs.**

This course deals primarily with the child in the elementary school. At first the emphasis is placed on physical growth and development. Later the emphasis is placed on the classification, development and significance of the various instincts. The instinctive tendencies are used as a basis for understanding the whole mental life, intellectual, emotional and volitional.

Lectures, reports, discussions, text-books and outside readings.

**Education 222. Teaching Children How to Study. 2 hrs.**

The several fundamental factors of logical study are discussed and an effort is made to determine how teachers may direct pupils to do their school work in such a way as to prepare them to solve more effectively their present and near future problems.

**Education 223-224. 4 hrs.****History of Modern Elementary Education.**

This course is organized for students who expect to become elementary school teachers after two years of preparation. While some attention will be given to the important phases of the general history of education the problems of the course will be such as are of vital interest and significance to elementary school teachers.

**Education 226. Principles of Teaching. 3 hrs.**

The course will be devoted to a study of the principles which underlie successful teaching and of the most effectual ways of incorporating these principles into practice. Methods of teaching will be approached from the point of view of the end to be attained, the method in each case being specialized instruments or means for the accomplishment of the aim.

**Education 233-234. History of Modern Education 4 hrs.**

Courses to be devoted to a study of the evolution of modern educational thought and practice in the field of secondary education from the early Christian times, in order to help teachers understand how things have happened to be as they are in the educational world today as well as to solve more successfully the every day problems of the high school class room.

**Education 241. Supervision of Class-room Instruction. 2 hrs.**

Elementary Education 235 is a prerequisite to this course, which is devoted to a discussion of the best ways and means of helping teachers solve the problems discussed in Course 235.

**Education 242. School Administration. 2 hrs.**

Among the problems which are considered in this course are: How the various units of educational administration have been developed and systematized. How the State controls and supports education. Methods of organizing efficient supervisory corps in State and City. How children in the schools are classified and their progress promoted through compulsory education, promotion, retardation, acceleration, elimination, special schools and classes, and school discipline. The function of school statistics, records and reports, and the most effective methods of keeping the same.

**Education 243. Principles of Education. 2 hrs.**

A study of the physiological, biological, psychological and sociological principles which are being incorporated in the best of modern educational thought and practice.

**Education 244. Principles of Education. 2 hrs.**

A continuation of Course 243. In this course considerable attention will be paid to the study of the educational values of the various high school studies.

**Education 247-248. Social Education. 4 hrs.**

This course is devoted to a study of the problem of how the school through its various activities can most effectively develop socially efficient citizens. The discussions of the class will be based to some extent upon Scott's "Social Education" and King's "Education for Social Efficiency."

**ELEMENTARY EDUCATION.**

Miss Leach

Mr. Henry

**Elementary Education 211. 3 hrs.****Principles and Observation of Teaching in Elementary Schools.**

The course to be devoted to a study of the principles which underlie successful teaching and of the most effective ways of incorporating those principles into practice. An integral part of the work of the course will be supervised observation of the teaching of most of the elementary school subjects.

**Elementary Education 212. 2 hrs.****Principles and Observation of the Teaching in Elementary School Geography.**

Course deals with aims and principles of modern geography, with special emphasis on subject matter as a basis of method. Problem setting with the writing and criticism of units of study. Observation in the grades.

- Elementary Education 214a.** 2 hrs.  
**Principles and Observation of the Teaching of Primary English.**  
 The aims of primary English as taught by means of the story, picture, games and conversation. Attention given to selection and organization of material from the child's experiences.
- Elementary Education 214b.** 2 hrs.  
**Principles and Observation of the Teaching of Technical English.**  
 Brief review of grammar. Necessity for motivating the study. Methods of class presentation. Application of principles to oral and written composition.
- Elementary Education 215.** 2 hrs.  
**Principles and Observation of the Teaching of Elementary School Arithmetic.**  
 First part of course deals with content of Elementary School Arithmetic. Practice given in solution of problems. Socialization of Arithmetic. Course of study based upon observation in the grades.
- Elementary Education 216.** 2 hrs.  
**Principles and Observation of the Teaching of Elementary School Arithmetic.**  
 A continuation of Course 215 with emphasis upon methods of teaching. Writing of lesson units; observation in the grades. Best books reviewed and investigation made of recent scientific tests.
- Elementary Education 221-222.** 4 hrs.  
**Elementary School Organization and Management.**  
 Course deals with underlying principles of teaching. First discussions based on problems met in practice teaching and substitution. Motivation and socialization of school work; making of daily programs; routine factors and organization of Elementary School curriculum from topics for discussion.
- Elementary Education 223.** 2 hrs.  
**Principles and Observation of the Teaching of Elementary School History.**  
 The values of history and their relation to the aim and methods of the teacher; the use of the text-books, problem setting; supplementary reading; uses of maps and illustrative material. Observation in the grades.
- Elementary Education 224.** 2 hrs.  
**Principles and Observation of the Teaching of Elementary School Civics.**  
 Organization of course in Civics for Elementary Schools. Selection of material for use in preparing lessons in Civics. Value of school government. Observation in the grades.
- Elementary Education 225.** 2 hrs.  
**Principles and Observation of Teaching Primary Reading.**  
 Treatment of following problems in teaching oral and silent reading: Standard Methods—letter, phonic, word sentence. Value of Drill—use of games and devices. Treatment of phonics in Modern Methods. Preparation and teaching of reading lessons. Observation in the grades.
- Elementary Education 227a. Supervised Teaching.** 3 hrs.
- Elementary Education 227b. Supervised Teaching.** 3 hrs.
- Elementary Education 228a. Supervised Teaching.** 3 hrs.



**Elementary Education 228b. Supervised Teaching. 3 hrs.**

Note.—The above courses in Supervised Teaching are open only to students registered in the Normal Training Division of the Teachers College.

These courses are in charge of the critic teachers in the various grades of the Public School System and under the supervision of the Director of the Normal Training Division. The academic year consists of four cycles, two spent in supervised teaching and two in substitution. During the practice teaching cycles the student is given training in the teaching of all the subjects of the curriculum, the organization and planning of units of study to be taught in the grades, and in the technique of class room management.

**Elementary Education 231. Child Study. 2 hrs.**

This course deals primarily with the child in the elementary school. At first the emphasis is placed on physical growth and development. Later the emphasis is placed on the classification, development and significance of the various instincts. The instinctive tendencies are used as a basis for understanding the whole mental life, intellectual, emotional and volitional. Lectures, reports, discussions, text-book and outside readings.

**Elementary Education 232. 2 hrs.****Teaching Pupils How to Study.**

This course takes up the method by which efficient members of the social group solve their problems. The work that is being done in the average school is next considered with a view of bringing to consciousness the difficulties or problems that must be met. The several fundamental factors of logical study are discussed and an effort is made to determine how teachers may direct pupils to do their school work in such a manner that they will be better able to solve their present and near future problems.

**Elementary Education 233. 2 hrs.****Increasing Teaching Efficiency.**

This course will be devoted to the discussion of such problems as: What traits, capacities and abilities ought to be revealed in the work of teacher and pupils? Increasing teaching efficiency through vitalizing subject matter taught. Increasing efficiency through improving methods of making assignments, of questioning and of managing classes. Important types of lessons and critical points in the teaching of each type.

**ADVANCED COURSES IN PRINCIPLES OF TEACHING.**

The following advanced courses in the Principles of Teaching elementary school subjects are planned to meet the most vital needs of the Elementary school teachers of the city. Announcements of courses to be offered will be made from semester to semester.

**Elementary Education 241. Primary Reading. 2 hrs.**

Advanced course in the teaching of Primary reading. Establishment of standards of judgment for selection of text-books in reading. Comparative study of modern reading methods. Emphasis upon problems arising from school room practice.

**Elementary Education 242. Story Telling. 2 hrs.**

Study of types of literature appealing to children of the primary grades. Aims of story telling; choice of stories; characteristics of educative story-practice in art of presentation.

**Elementary Education 243. 2 hrs.****Elementary School Arithmetic.**

Principles and problems involved in teaching upper grade arithmetic with a general insight into historical basis for present methods of teaching mathematics. Analysis of Elementary School Course of Study in arithmetic.



**Elementary Education 244.** 2 hrs.

**Elementary School History.**

Principles and aims of teaching Elementary school history. Organization of history curriculum. Problem-setting and criticism of text-books.

**Elementary Education 245.** 2 hrs.

**Elementary School English.**

Problems involved in teaching Upper grade English. Possibilities of group-work and self-criticism. Narration, description, exposition and argumentation treated as Upper grade English units.

**Elementary Education 246.** 2 hrs.

**Elementary School English.**

Study of types of literature for use in Elementary School curriculum. The use of the story, poem and novel. Organization of units of study and type lessons.

**Elementary Education 247.** 2 hrs.

**Elementary School Geography.**

A study of the changing aims in teaching geography. Problem-setting, type lessons, units of study. Use of illustrative materials.

**Elementary Education 248.** 2 hrs.

**Elementary School Geography.**

The analysis of the Elementary Schools. Course of study in geography. Organization of units of study. Type lessons on the continent as a unit of study. Problem-setting within the units of the course of Study.

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**ADVANCED SUPERVISED TEACHING COURSES.**

The following advanced courses are offered only upon request to teachers in service and students qualified for the degree of Bachelor of Science in Elementary Education. Modern educational problems are studied and the solution attempted in the class room of the student. Intensive problem in the form of a survey to comprise the material for the supervised teaching.

**Elementary Education 251.** 4 hrs.

**Advanced Supervised Teaching in Primary Reading.**

**Elementary Education 252.** 4 hrs.

**Advanced Supervised Teaching in Story Telling.**

**Elementary Education 253.** 4 hrs.

**Advanced Supervised Teaching in Elementary Arithmetic.**

**Elementary Education 254.** 4 hrs.

**Elementary Supervised Teaching in Elementary School History.**

**Elementary Education 255.** 4 hrs.

**Advanced Supervised Teaching in Elementary School English.**

**Elementary Education 256.** 4 hrs.

**Advanced Supervised Teaching in Elementary School English.**

**Elementary Education 257.** 4 hrs.

**Advanced Supervised Teaching of Elementary School Geography.**

**Elementary Education 258.** 4 hrs.

**Advanced Supervised Teaching of Elementary School Geography.**

## ELEMENTARY SCHOOL ARTS.

## DRAWING.

**Industrial Arts 221.      Drawing and Handwork.      2 hrs.**

The working out of problems to be found in the Elementary School course of Study in Drawing and Handwork

**Music.****Music 211-212.      Elementary School Music.      2 hrs.**

Analysis of Elementary course of Study in Music. Organization and teaching of lessons.

**Penmanship.****Penmanship 221.      1 hr.**

A course in practical handwork together with study of aims and principles of teaching of subjects in Elementary Schools.

## ENGLISH

Mr. Bradley

Mr. McDonald

**English 111.      English Composition.      3 hrs.**

Aim: To help the student improve his ability to express himself effectively in writing thoughts which he feels are worth communicating to others. There is a great demand for men and women able to say what they want to say in the most forceful and telling way. This course is required of all College of Arts students who are candidates for the Junior College Arts diploma.

**English 112.      English Composition.      3 hrs.**

A continuation of the study and practice of the elementary principles of composition begun in Course 111. This course also is required of all College of Arts students who are candidates for the Junior College Arts diploma.

**English 211.      Practical English.      2 hrs.**

This is a beginning course in English Composition. The student is acquainted with some of the common forms of written communication, and given practice in writing them while he is at the same time drilled in the established principles of good English. The method is inductive. Technical instruction in the writing of news stories, character sketches, reviews, editorials, critiques, short business reports, and the various forms of autobiographic writing is given. The student is then given practice in writing these various forms, and in pointing out mistakes. Such principles as Unity, Emphasis, Coherence and Variety are established. Effort is made to make the course of practical value to the student, and insofar as possible all theme assignments are along lines the student finds of vital interest, and which he will follow after graduation.

**English 212.      Practical English.      2 hrs.**

This is a continuation of English 211. In this course the student is given instruction in scientific and technical writing, popular argument, and some of the more advanced narrative and expository forms. More emphasis will be placed on accuracy and completeness in gathering the information for the various themes written.

**English 121-122.      Instrumental Composition.      4 hrs.**

This course is devoted to the study and practice in writing of the character sketch, the editorial, the critique, the review, the autobiography, biography, history and scientific writing. Each student prepares one long article in one of these fields.

**English 131-132.      Advanced Instrumental Composition.      4 hrs.**

This is a course in magazine writing for advanced students who will study the different types of magazine articles, the structure and style of each, the editorial policies of magazines, gathering and writing up of material and the market for magazine material.

**English 133-134. The Short Story. 4 hrs.**  
This course is devoted to a study of the short story, together with practice in the writing of short stories.

**English 213. Grammar. 1 hr.**  
An intensive study of technical grammar as a basis for Elementary Education 214b, Principles and Observation of Teaching Technical English.

**English 222. Story Telling. 2 hrs.**  
Study of types of literature appealing to children of the primary grades. Aims of story telling. Choice of stories. Characteristics of educative story. Practice in story telling in grades of elementary school.

**English 233. Newspaper Writing. 2 hrs.**  
This is a course in newspaper writing for teachers. Study is made of the place of the newspaper in the community and how it may help or harm the work of the public schools. This is followed by a technical study of news and news writing. News is defined, and principles laid down for determining its value. The student then learns the sources of news, and how to gather it. He then takes up the technique of the news story, and is given practice in writing it. In the latter part of the course some attention will be paid to writing for a specialized newspaper—The Teachers' Magazine.

**English 234. Business Correspondence. 2 hrs.**  
This course is planned especially for those men and women either planning to enter or now in the profession of teaching. The place of the letter in modern business and professional life is indicated; the essential characteristics of good business English pointed out; the field of correspondence classified; technical instruction given in the preparation and writing of each special type. Students are not eligible to this class unless they have taken and passed English 233.

**English 411-412. English for Engineers. 4 hrs.**  
The purpose of this course is to train the student in the use of English in oral and written presentation of scientific matter and in business letter writing.

## ENGLISH LITERATURE

Mr. Whiteford

Miss Kinney

**English Literature 111. Modern American and English Literature. 2 hrs.**  
This course gives students a chance to read, discuss and appreciate the best of literature which is influencing the lives of men and women of today.

**English Literature 112. Modern American and English Lit. 2 or 3 hrs.**  
Continuation of Literature 111.

**English Literature 121. A Comparative Study of Modern Drama 1. 2 hrs.**  
The Continental, the English, and the American dramatists are studied by lectures and discussions arising out of critical examination of their masterpieces.

**English Literature 122. A Comparative Study of Modern Drama 2. 2 hrs.**  
Continuation of course 121.

**English Literature 123. General Survey of English Literature 1. 2 hrs.**  
From Beowulf to Milton.

**English Literature 124. General Survey of English Literature 2. 2 hrs.**  
From Milton to Wordsworth.

**English Literature 127. The Romantic Movement. 2 hrs.**  
From the publication of Wordsworth's *Lyrical Ballads*, 1798, to the death of Charles Lamb, 1834. A preliminary discussion of the early phases of English Romanticism followed by a more detailed study of the works of Wordsworth, Coleridge, Shelley, Byron, Keats, Scott, De-Quincey, and Charles Lamb.

- English Literature 128. Tennyson—Browning—Arnold.** 2 hrs.  
An intensive study of the poetry of Tennyson, Browning, and Matthew Arnold.
- English Literature 133. The Victorian Era 1.** 2 hrs.  
The works for particular study are those of Carlyle, Tennyson, Browning, Ruskin, Arnold, Rossetti and William Morris.
- English Literature 134. The Victorian Era 2.** 2 hrs.  
Contemporary tendencies in English Literature. The literary tendencies in England today exemplified in the writings of Swinburne, Alfred Austin, Robert Bridges, William Watson, Francis Thompson, William Ernest Henley, John Davidson, Rudyard Kipling, Stephen Phillips, John Masefield, Bernard Shaw, Thomas Hardy, Mrs. Humphry Ward, William De Morgan, Enoch Arnold Bennett, and H. G. Wells.
- English Literature 135. Shakespeare's Tragedies 1.** 3 hrs.  
A general discussion of Shakespearean tragedy with an intensive study of the texts of *Richard II*, *Richard III*, *Julius Caesar*, and *Hamlet*.
- English Literature 136. Shakespeare's Tragedies 2.** 3 hrs.  
An intensive study of the texts of *Macbeth*, *Othello*, *King Lear*, and *Antony and Cleopatra*.
- English Literature 137. American Literature 1.** 2 hrs.  
A study of the development of American Literature from Benjamin Franklin to Nathaniel Hawthorne.
- English Literature 138. American Literature 2.** 2 hrs.  
A study of the development of American Literature from Hawthorne to William Dean Howells.
- English Literature 141. English Fiction 1.** 3 hrs.  
A study of the development of English fiction from Sir Thomas Malory to Miss Mitford.
- English Literature 142. English Fiction 2.** 3 hrs.  
A study of the development of English fiction from Disraeli to William De Morgan.
- English Literature 143. The English Drama 1.** 3 hrs.  
A study of the English drama from the Miracle plays to the closing of the theatres. 1642.
- English Literature 144. The English Drama 2.** 3 hrs.  
A study of the modern English drama from 1642 to 1917. Selected plays of the dramatists will be read in class. The course consists of lectures which place especial emphasis on the drama of Pinero, Jones, Shaw, Phillips, Galsworthy, and Masefield. Contemporary continental dramatic influences as exerted by such writers as Ibsen, Dumas *fils*, Eugene Brieux, Rostand, Sudermann, and Hauptmann will be noted.
- English Literature 145. English Versification.** 2 hrs.  
An inductive study of English Poetry. Texts: Alden's *English Verse*, and Whiteford's *Anthology of English Poetry: Beowulf to Kipling*.
- English Literature 146. The Poetry of Milton.** 2 hrs.  
In connection with this course, a thorough study will be made of the Puritan period.
- English Literature 147. Beginnings of Lyric.** 2 hrs.  
Poetry in Europe; Greek, Latin, Italian, Provencal, French, German and English.
- English Literature 148. Medieval Legend.** 2 hrs.  
Study of the rise, development and literary appearance of certain Medieval legends.



**English Literature 149-150. Literature for Children. 4 hrs.**

A fundamental course in such parts of the great world literature as belong to children by right of special fitness. The great body of fairy material, the principal folk epics and the more important of the old ballads will be studied with particular care. (Prerequisite, Literature 123 and 124. A general knowledge of Medieval history will also be assumed and a previous or current course in child-psychology is strongly recommended.)

**English Literature 151. Anglo-Saxon 1. 2 hrs.**

This course consists of a study of Anglo-Saxon grammar preceding a careful reading of selections contained in Bright's *Anglo-Saxon Reader*.  
Open to graduates and under-graduates.

**English Literature 152. Anglo-Saxon 2. 2 hrs.**

Beowulf. Text—the edition of A. J. Wyatt. Prerequisite, Course 151.  
Open to graduates and under-graduates.

**Literature 153. Middle English. 2 hrs.**

A careful study of selections in Emerson's *Middle English Reader*.  
Open to graduates and under-graduates.

**English Literature 155. Chaucer. 2 hrs.**

Reading of *Canterbury Tales*. Language and metre of Chaucer. Grammar.  
(Anglo-Saxon 1 is strongly recommended as a preliminary course).

**English Literature 156. Chaucer. 2 hrs.**

*Canterbury Tales* completed. Remaining poems of Chaucer studied with special reference to literary relations and influences. Prerequisite, Course 154.

Open to graduates and under-graduates.

**English Literature 157-158. Seminar in English Fiction. 2 to 4 hrs.**

A study of the major and minor currents in English fiction from Elizabethan times to the beginning of the Victorian Era. In this course, which is open only to graduate students, emphasis is placed on showing how the English novelists achieved from the work of their predecessors and contemporaries a surety of atmosphere, motivation, dialogue, and characterization, that made possible the flowering period of English fiction with the advent of Dickens and Thackeray into authorship.

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**FRENCH.**

Mr. Pimienta.

Mr. Rey.

**French 101-102. Elementary French. 5 hrs.**

The aim of this course is to teach students how to read and understand French and to communicate their ideas in the French language. Simple French texts serve as the basis for class recitations and drills. The grammar of the language is studied with a view to strengthening other work of the course.

**French 103-104. Intermediate French 4 hrs.**

The aim of this course is to develop fluency in speaking and rapidity in reading and writing French.

Other courses in French to be announced later.

**French 105-106. Conversational French. 2 hrs.****French 111-112. Romantic and Modern Writers. 6 hrs.**

Selections from the literature of the romantic and modern realistic writers. Lectures and collateral readings. The aim of the course is to give the student a general idea of the development of French Literature from the romantic to the modern realistic period. The year.

**French 121. Seventeenth Century Tragedy. 3 hrs.**

A study of representative dramas of Corneille and Racine, Lectures and collateral reading. First semester.



- French 122. Seventeenth and Eighteenth Century Comedy.** 3 hrs.  
A study of representative comedies of Moliere, Regnard, Mariveux, and Beaumarchais, etc. Lectures and collateral reading.

### GEOLOGY.

Mr. Henry.

Mr. Laird.

- Geology 211. Geography.** 3 hrs.  
A comprehensive content course in Elementary School geography, designed to give the subject-matter as a basis for Elementary Education 212—Principles and Observation of Teaching Elementary School Geography.

- Geology 421. Geology.** 3 hrs.  
A general course in historical geology in which is made a study of earth processes and earth features.

### GERMAN.

Mr. Rey.

Mr. Kissling.

- German 101-102. Elementary German.** 8 hrs.  
The year. Open to all students without German. Thorough drill in the essentials of German Grammar, pronunciation, conversation and the acquisition of a good vocabulary. Selected reading in easy prose and verse.

- German 103. Intermediate German.** 3 hrs.  
First Semester. Prerequisite German 101-102 or two entrance units. Selected prose readings of modern writers. Prose composition, supplemented by discussion of syntax.

- German 104. Classical German.** 3 hrs.  
Second Semester. Prerequisite German 103 or three entrance units. A classical drama of Lessing, Schiller or Goethe will be read and discussed in class; also literature of the nineteenth century. A thorough course in prose composition will be given.

- German 106. Scientific German.** 3 hrs.  
Second Semester. Prerequisite German 103 or three entrance units. Reading of technical literature, accompanied by drill on word formation, word compounds and sentence structures. The object of the course is to enable the student to read German technical literature.

- German 111-112. Classical, Romantic and Modern Writers.** 6 hrs.  
The year. Selections from the literature of the classical, romantic and the modern realistic writers. Lectures and collateral reading. The aim of the course is to give the student a general idea of the different phases of German literature from the classical to the modern period.

- \*German 121-122. Nineteenth Century Drama.** 4 hrs.  
The year. A study of the development of the German drama since the classical period. First semester: Selected dramas from Kleist, Hebbel, Grillparzer. Second semester: Selections from Wildenbruch, Sudermann, Hauptmann. Lectures and collateral readings.

- \*German 131-132. Goethe and Schiller.** 4 hrs.  
The year. A study of the classic drama. First semester: Selected dramas from Schiller. Second semester: Selections from Goethe. Lectures and collateral readings.

\*Only one of these courses will be given, either German 121-122 or German 131-132.

- German 141-142. Introduction to German Dramatic Literature** 4 hrs.  
The year. This course is intended for those who cannot meet the morning classes. Several important plays of German Literature will be studied and interpreted with reference to contents, style and dramatic structure. The class meets twice a week in the afternoon.

## GREEK.

Mr. Kissling.

- Greek 111. Elementary Greek. 2 or 3 hrs.**  
An introductory course to the study of the Greek language. The course is intended for beginners and for those who desire to review the elements of Greek. Offered in two sections.
- Greek 113-114. Elements of New Testament Greek. 2 hrs**  
This course, not identical with "Elementary Greek" is offered to those students who desire to study the language with a view to the practical use of the New Testament.
- Greek 121. Xenophon's Anabasis (First Semester). 2 or 3 hrs.**  
Prerequisite, a course in Elementary Greek. Exercises in the writing of Greek.
- Greek 122. Homer's Odyssey (Second Semester). 2 or 3 hrs.**  
Exercises in the writing of Greek continued.
- Greek 128. Ancient Mythology (First Semester). 1 hr.**  
No knowledge of Greek or Latin is required. This course aims at acquainting the student with all the important classical myths which re-appear variously in modern literatures.
- Greek 129. Ancient Mythology (Second Semester). 1 hr.**
- Greek 131. Plato's Apology, Crito, and Selections. 2 or 3 hrs.**  
Study of the life and method of Socrates.
- Greek 132. Lyric Poetry (Second Semester). 2 or 3 hrs.**  
Reading and interpretation of Greek lyric poetry, exclusive of the Pindaric Odes.
- Greek 135. New-Testament Greek (First Semester). 2 hrs.**  
Study of selected New Testament writings from a linguistic point of view. This course is open to undergraduate students and to mature persons whose knowledge of Greek is sufficient to enable them to follow the course with profit. New-Testament Greek is not difficult.
- Greek 137-138. Greek Literature in English. 2 hrs.**  
No knowledge of Greek is required. The object of the course is to acquaint students with the masterpieces of Greek Literature.
- Greek 141. Introduction to Greek Tragedy (First Semester). 2 hrs.**  
The tragedies selected are the Alcestis of Euripides, the Antigone of Sophocles, and the Prometheus of Aeschylus.
- Greek 142. Homer's Iliad (Second Semester). 2 hrs.**  
Nine to twelve books are read and interpreted in class.
- Greek 143. Lucian (Second Semester). 2 hrs.**  
Rapid reading of several of the witty dialogues of this late writer.
- Greek 144. Attic Orators. 2 hrs.**  
Demosthenes' De Corona and Isocrates' Panegyricus. Study and interpretation of the text with special reference to the political and literary characteristics of these writers.
- Greek 147. Ancient Philosophy (First Semester). 2 hrs.**  
This is a lecture course, based upon the best modern interpreters of Greek and Roman thought, with quizzes, reports and discussions. No knowledge of Greek or Latin is required. The books necessary for the course are contained in the University library.
- Greek 148. Ancient Philosophy (Second Semester). 2 hrs.**  
Continuation of the First Semester's work.
- Greek 151. Plato's Republic. 2 hrs.**  
Careful study and analysis of the text with lectures on Plato's philosophy.

**HISTORY.**

Mr. Bradley.

Mr. Henry.

**History 113-114. General American History, 1760-1860. 6 hrs.**

The Revolution, its cause and its place in history, formation of the constitution, growth of a national spirit, rise of the plantation and slave system, growth of the tariff issue, territorial expansion, anti-slavery movement, slavery and secession, and general consideration of national problems.

**History 115-116. 6 hrs.****General History of Europe from the Downfall of Rome, 476, to the Treaty of Westphalia, 1648.**

A study of the various elements that were to make the foundations of European nationalities. Such great movements as the rise of the Christian Church, the upbuilding of the Papacy, the spread of Moslem faith, Feudalism, the Crusades, the Renaissance, and the Protestant Reformation will be considered.

**History 121. Civil War and Reconstruction, 1860-1876. 3 hrs.**

Stress will be placed upon military, diplomatic, political and economic phases of this critical period.

**History 122. Recent American History, 1877-1917. 3 hrs.**

Study of American historical problems of the last forty years with constant application to the present day affairs.

**History 123. Europe from 1648 to 1815. 3 hrs.**

The development of national spirit, colonial expansion of Europe, military and diplomatic history of the 18th century, rise of Russia, new age of liberalism, French Revolution, and the Napoleonic Wars.

**History 124. 3 hrs.****Modern Europe and Her Problems, 1815 to the present time.**

The era of political revolt, development of present European powers, rise of Italy, Germany and Japan; development of constitutional government, growth of democracy, growth of labor and socialistic movement, and beginnings of the present World War.

**History 131. Colonial America, 1492-1760. 3 hrs.**

From the first voyage of Columbus to the eve of the American Revolution. European backgrounds of American History, the rise of the various colonies, the great 18th century conflict, foundation of United States sectionalism, civic and economic development of the colonies, will be featured.

**History 135-136. 6 hrs.****General History of England from Earliest Times to 1815.**

Special attention will be devoted to the political, constitutional, social and economic aspects of English history.

**History 137. England Since 1815. 3 hrs.**

A more intimate study of England and the development of Greater Britain during the last century. The Reform Movements, Factory and Labor Legislation, Imperial Expansion, Imperial Problems, the Irish Question and Diplomacy will be among the important questions discussed.

**History 211. American History. 3 hrs.**

American History reviewed and studied as subject matter—basis for Elementary Education 223—Principles and Observation of Teaching Elementary School History. Course emphasizes historically the most important of American social, industrial civic and commercial problems.

**History 231-232. Modern European History. 4 hrs.**

This course is devoted to the historical study of the most important European social, industrial, commercial and civic problems.

**History 233-234. Modern American History. 4 hrs.**

This course is devoted to the historical study of the most important of our American social, industrial, commercial and civic problems.

**History 235-236. Current Events Magazine Club. 2 hrs.**

A study of current events as recorded by leading weeklies. Each member of the club is supposed to subscribe for one of the standard weeklies and to be responsible for reports on events of importance recorded in his magazine.

## HYGIENE AND SANITATION.

Mr. Selby.

Mr. Harold Cohn.

**Hygiene 111. Hygiene and Sanitation 2 hrs.**

This course includes the study of the atmosphere and soil. The study of water, food beverages, ventilation and heating. The study of disinfection, quarantine, disposal of sewage and filtration of water. The study of personal, public, school, and industrial hygiene.

**Hygiene 112. Social Hygiene. 2 hrs.**

This course consists of an advanced study in the problems of hygiene. It deals with problems confronting the sanitary engineer. It also includes surveys to filtration plant, dairy farm, penal institution, etc. Each student is assigned to deal with a problem in one community.

## LATIN.

Mr. Kissling.

Note.—Students who enter with only two or three years of Latin and desire to continue the study of the subject should consult with the head of the department.

**Latin 101. Elementary Latin. 2 hrs.**

This course is intended for beginners in the study of the Latin language. It is offered in two sections, the second of which is intended for teachers and other mature persons.

**Latin 102. Elementary Latin. 2 hrs.**

Continuation of the First Semester's work.

**Latin 111. Cicero's De Senectute and De Amicitia. 3 hrs.**

This course is the Freshman Latin course and continues the four year Latin studies of the High School.

**Latin 112. Ovid's Metamorphoses. 3 hrs.**

Prose Composition continued.

**Latin 113. Livy. 3 hrs.**

Books XXI and XXII. Study of Latin Literature.

**Latin 114. Horace's Odes. 3 hrs.**

With selections from the Epodes. Study of Horace's metres and Latin prosody in general. Study of Latin Literature continued.

**Latin 115. Practical Latin Course. 1 hr.**

No knowledge of Latin is required. This course aims to show the Latin derivation of many English words. It increases the student's knowledge of English and should be taken by all who have had no Latin and who desire to improve their English. Excellent also for technical students.

**Latin 121. Catullus. 2 hrs.**

Study and interpretation of the poems with lectures on the metres employed.

**Latin 122. Cicero's De Officiis. 2 hrs.**

With a study of ethical ideas among the Romans.

**Latin 127. Ancient Mythology (See Greek 127) 1 hr.****Latin 131. Horace's Epistles. 2 hrs.**

Study of Horace's life, character, and attitude toward life and letters.

**Latin 132. Cicero's Tusculan Disputations. 2 hrs.**

Careful study and analysis of the style and philosophic content of these essays.



**Latin 140. English Literature Interpreted from the Classical Point of View. 2 hrs.**

No knowledge of Greek or Latin is required. This course selects from the great wealth of English Literature such portions of it as have been conceived wholly or to a great extent under classical influences.

**Latin 141. Quintilian's Institutes, Book X. 2 hrs.**

Detailed examination of Quintilian's literary criticisms and of his practical suggestions.

**Latin 143. Lucretius' De Rerum Natura**

Special study of Epicurean philosophy.

**Latin 148. Ancient Philosophy (See Greek 148) 2 hrs.**

**Latin 701. Pharmaceutical Latin. 1 hr.**

This course is required by state regulations of all Pharmacy students. It aims to acquaint the student with a sufficient knowledge of Latin grammar and vocabulary to enable him to understand the technical expressions and their abbreviations so frequently occurring in the work of his profession.

**LAW.**

**Law 611-612. Contracts. 4 hrs.**

Offer and acceptance; express and implied conditions in contracts; form and consideration; contracts within the Statute of Frauds; joint and several contracts; mistakes; misrepresentation; duress and illegal contracts. Operation of contract embracing the limits of contractual obligation and assignment of contract; interpretation of contract embracing construction; discharge of contract by agreement, by performance, by breach, by impossibility of performance and by operation of law. Text book and cases.

**Law 613. Elementary Law. 2 hrs.**

Elementary principles of jurisprudence; study of leading branches of the law covering the law of private rights, including personal rights, personal security, personal liberty, property rights, and family rights; wrongs against family rights; tort feasons; legal remedies; judicial remedies; public rights; public wrongs and remedies. Lectures and text book.

**Law 614. Torts. 2 hrs.**

Assault and battery; imprisonment; trespass; conversion; defamation; malicious prosecution; conspiracy; interference with social and business relations; negligence; degrees of care; liability from fire and explosion; deceit; duties of land owner; animals; hazardous occupations. Lectures and text books.

**Law 615. Domestic Relations. 2 hrs.**

Marriage; personal and property rights of husband and wife at common law; legal capacity of married women; contracts; property interests and suits between husband and wife; the right of the surviving husband or wife in the other's property; modern reform legislation; dissolution of marriage by divorce; the lex loci as to divorce actions; Infancy; guardian and ward; master and servant embracing the employer's liability and risks assumed by the servant; modification of the law of master's liability by statutes. Lectures and text book.

**Law 616. Partnership. 2 hrs.**

Formation of a partnership; partnership as to third persons; nature of a partnership; powers of partners; rights and remedies of creditors; duties and liabilities of partner's interest; dissolution of partnerships; accounting and distribution; limited partnership. Lecture and text books.

**Law 621. Sales and Personal Property. 2 hrs.**

Sales and contracts to sell; statute of frauds; conditions and warranties, and remedies for breach thereof; delivery; acceptance and receipt; seller's lien; stoppage in transitu; bills of lading and jus disponendi; uniform "Sales Act"; Factor's Acts. Lectures and text book.

**Law 622. Agency. 2 hrs.**

Creation of the relation; liability of principal for acts of agent; agent's liability to third persons; disclosed and undisclosed principals; duties of principal and agent to each other; delegation of authority; revocation; ratification. Lectures and text book.

**Law 623-624-637. Real Property and Conveyancing. 6 hrs.**

Distinction between real and personal property; acquisition, possession and transfer of rights in personal property; incidents of ownership in real property; tenure; estate; seizen; uses and trusts; mines; wild animals; border trees; emblements; fixtures; waste; profits; streams; percolating waters; surface waters; easements; covenants running with the land, franchises; rents; landlord and tenant; highways; remainders; executory interests; reversions. Rule in Shelley's Case; rule against perpetuities.

Transfer of estates by will and adverse possession; conveyance to strangers; description of property granted; boundaries; estates created; incorporeal hereditaments; deeds; covenants for title; mortgages; remedies and remedial rights and agent to each other; delegation of authority; revocation; ratification; liens and chattel mortgages.

Systematic instruction in the substantive law of conveyancing and a thorough drill in the actual preparation of all the more important forms of conveyances, including deeds, mortgages, wills, assignments, corporate and partnership articles, and such other instruments as a lawyer in actual practice is likely to be called upon to prepare, is also given in connection with this course. Text book and lectures.

**Law 625. Criminal Law and Procedure. 2 hrs.**

Criminal law and statutory offenses; intent in general and as affected by circumstances, as insanity, intoxication, infancy, coercion, ignorance or mistake; justification; consent; condonation; contributory acts; jurisdiction; crimes against the person, property, public policy, health, peace, decency and morality; pleading; trial; evidence; proceedings after verdict. Lectures and text book.

**Law 626. Bailments and Carriers 2 hrs.**

Brief consideration of bailments in general, and particular attention to the law of pledge, innkeepers and common carriers of goods; carriers of passengers; the postoffice and telegraph and telephone companies as carriers of messages. Lectures and text book.

**Law 631-632. Equity Jurisprudence. 4 hrs.**

The origin and development of equity jurisdiction; general maxims; equitable titles, including an exhaustive study of trusts and of the powers, duties and liabilities of trustees. Grounds of relief in equity; equitable estoppel; election, satisfaction, notice, priorities and subrogation. Bills of peace; bills of quia timet; interpleader; injunctions; specific performance and receivers. Lectures and text book.

**Law 633-634. Corporations. 4 hrs.**

The nature and classes of corporations; their creation, charter and organization; corporate franchises; contracts and powers; consolidations and combinations in restraint of trade and competition. The doctrine of ultra vires; torts and crimes of corporation; control of corporations, state and national; correlative rights of a corporation, shareholders, officers, promoters, and creditors. Creation and control of public corporations; constitutional limitation concerning the same; police powers; control of streets and highways; powers of taxation and assessments; eminent domain; corporate powers; municipal securities; charters; ordinances; liabilities and duties. Lectures and text book.

**Law 635. Negotiable Instruments. 2 hrs.**

Formal requisites; acceptance; indorsement; transfer; obligations of parties to bills and notes; diligence in presentments for acceptance or payment and notice of dishonor and protest; checks; bonds; negotiable instruments statute. Lectures and text book.

**Law 636. Suretyship. 2 hrs.**

Suretyship and guaranty; the effect of the statute of frauds; surety's defenses; the right of subrogation; indemnity; contribution; exoneration; surety's rights to creditor's indemnities and vice versa. Lectures and text book.

**Law 637. Real Property (Advanced Course). 2 hrs.****Law 641. Damages. 2 hrs.**

Function of court and jury in estimating damages; nominal, exemplary, liquidated, direct and consequential and avoidable damages. Counsel fees; certainty; compensation; damages for pecuniary interests; damages in actions of tort and contract; pain; mental suffering; aggravation and mitigation. Lectures and text book.

- Law 642. Pleading. 2 hrs.**  
Principal rules of common law pleading; demurrers; pleas by way of confession and avoidance; pleas by way of traverse; duplicity; departure; new assignment and motions based on pleadings; distinction between the more frequent forms of common law actions. Principles of code pleadings; principles and rules of affirmative statement; principles and methods of defensive pleadings under the codes; principle of real party in interest; principals of the one form of civil action. Lectures and text book.
- Law 643-644. Evidence. 4 hrs.**  
Judicial notice; presumptions; burden of proof; admissions; confessions; law and fact; character evidence; rule against hearsay; dying declarations as to pedigree and matters of public interest; declarations in regular course of business; declarations showing mental or physical conditions; *res gestæ*; opinion evidence; real evidence; proof of contents and authorship; account books; parole evidence rule; competency of witnesses; privilege; writings; rules governing examination of witnesses. Lectures and text book.
- Law 645. Wills. 2 hrs.**  
Gifts *Causa mortis*; descent and distribution; testamentary capacity; execution; revocation, and revival of wills; construction of wills; ademption and lapse of legacies; executors and administrators; payment of legacies; distribution of estate. Lectures and text book.
- Law 646. Constitutional Law. 2 hrs.**  
Making and changing written constitutions; jurisdiction of the United States; citizenship; police power; eminent domain; taxation; *ex post facto* and retroactive laws; state laws; impairing obligations of contract; regulation of commerce, money, and war; due process of law. Lectures and text book.
- Law E651. Quasi Contracts. 2 hrs.**  
Difference between contract and quasi contract; difference between tort and quasi contracts; mistake of law or fact; mistake as to creation of contract; unjust enrichment of defendant at expense of plaintiff; plaintiff's negligence no bar to recovery; effect of defendant's change of position; benefits conferred without request; recovery of money paid under compulsion; waiver of tort. Lectures and text book.
- Law E652. Bankruptcy and Federal Practice. 2 hrs.**  
The system of courts created under the authority of the constitution of the United States, the jurisdiction of the several courts, and the procedure therein. Lectures and text book.
- Law E653. Judgments. 2 hrs.**  
Nature and essentials; kinds, records, vacating, amending, modification; effect and satisfaction of judgments; garnishments; attachments; executions. Lectures and text book.
- Law E654. Insurance Law. 2 hrs.**  
Covering fire, life, accident, and marine insurance; insurable interests; concealment, misrepresentation and warranty; increase of hazard, ownership, alienation, breach of condition contained in policy; perils of the sea, accident, death, suicide, death at the hands of the law; death or injury by unlawful act; amount of recovery; subrogation; waiver and estoppel; assignment of policy and rights of beneficiaries. Lectures and text book.
- Law E655. Private International Law. 2 hrs.**  
A study of the law that governs in transactions between parties in different states, or in foreign countries, where the laws of the different states, or countries, as to the matter involved are different, as in judgments, marriage, divorce, legitimacy and adoption, capacity, testate and intestate succession, contracts, torts, crimes and trusts. Lectures and text book.
- Law 701. Pharmaceutical Jurisprudence.**  
The relation of Law and Pharmacy to each other. The law relating to the commercial transactions of the Pharmacist. Jurisprudence—its philosophy and scope. Right and wrong, common law and equity. History of Pharmacy legislation. Federal and State Food and Adulteration laws. Liability of Pharmacists, error in dispensing, for negligence, as manufacturer, etc. The course will be given in the College of Law.

**MARKETING.**

Mr. Mallary.

**Marketing 321. Psychology of Business. 2 hrs.**

A study of the human elements in business; the psychological principles underlying efficient organization; steps involved in solving the problems of business; human efficiency; analysis of the man and the job; education, promotion, remuneration and welfare of the employee, the psychology of advertising and selling.

**Marketing 323. Principles of Salesmanship. 3 hrs.**

Personality of salesman and equipment for business; principles of selling; analysis of market, customer, and goods; selling points; selling talks, the approach, getting an audience, holding attention, handling objections, closing sale.

**Marketing 324. Principles of Advertising. 3 hrs.**

A course in the fundamental principles of advertising and advertising technique. The following subjects are treated: Copy—its nature, purpose and mechanics; display; organization of agencies and their relation to publishers; rates; circulation; direct advertising; and advertising campaign.

**Marketing 325-326. Principles of Advertising. 4 hrs.**

A more advanced course covering the subject matter described in Marketing 324.

**Marketing 328. Economics of Retailing. 2 hrs.**

The distributive system; the consumer; the location, rent, and expenses of a retail business; retail salespeople, their work, wages and training; price maintenance; the department store, chain-store, and mail order house; buying; the failure rate and its causes; public regulation.

**MATHEMATICS.**

Mr. Brandeberry.

**Mathematics 111. College Algebra. 3 hrs.**

Rapid review of fundamental operations and principles. Systems of equations; theory of quadratics; ratio and proportion; progressions; binomial theorem; logarithms; determinants; higher equations.

**Mathematics 112. Analytical Geometry. 3 hrs.**

Coordinates in a plane. An analytical treatment of the straight line and conic sections. Polar coordinates; transformation of coordinates; tangents; parametric equations. Introduction to solid Analytical Geometry; the plane, the line, and quadric surfaces.

**Mathematics 113. Plane Trigonometry. 2 hrs.**

Definitions and relations regarding the six trigonometric functions. Circular measurement of angles. Logarithms and formulae, and their application to the solution of all classes of triangles. Emphasis laid on identities and trigonometric equations.

**Mathematics 114. Analytical Geometry. 5 hrs.**

A more specialized and extended course than Mathematics 112. For description see Mathematics 412.

**Mathematics 115. Plane and Spherical Trigonometry 3 hrs.**

Definitions and relations of the trigonometric functions. Measurement of angles. Logarithms and formulae, and their application to the solution of all classes of triangles. Identities and trigonometric equations. Elements of spherical trigonometry, with applications.

**Mathematics 121. Differential Calculus. 5 hrs.**

Pre-requisite Mathematics 111, 112 and 113. For description, see Mathematics 421.

**Mathematics 122. Integral Calculus. 5 hrs.**

Pre-requisite Mathematics 121. For description, see Mathematics 422.



**Mathematics 411. College Algebra. 3 hrs.**  
 Rapid review of the fundamental operations and principles; theory of quadratics; ratio and proportion; progressions; imaginary and complex numbers; inequalities; variables and limits; binomial theorem; logarithms; permutations and combinations; systems of equations; determinants; series; higher equations.

**Mathematics 412. Analytical Geometry. 5 hrs.**  
 Coordinates in the plane; curve and equation; the straight line; the circle; parabola, ellipse, and hyperbola; general equation of the second degree; transcendental curves and equations; polar coordinates; transformation of coordinates; tangents; parametric equations; Solid Analytics; the plane; the line; the sphere; quadric surfaces and equations of the second degree.

**Mathematics 413. Plane Trigonometry. 2 hrs.**  
 Definitions and relations regarding the six trigonometric functions. Circular measurement of angles. Logarithms and formulae, and their application to the solution of all classes of triangles. Emphasis laid on identities and trigonometric equations.

**Mathematics 421. Differential Calculus. 5 hrs.**  
 Prerequisite, mathematics 411, 412, 413. Variables, functions, limits, successive differentiation, etc. Practical applications of the derivative to Mechanics. Curve tracing, integration and elementary applications.

**Mathematics 422. Integral Calculus. 5 hrs.**  
 Prerequisite, mathematics 421. Application of the definite integral to the determination of length of arcs, area, volumes, center of gravity, moment of inertia of areas and volumes, etc.; partial and total derivatives; infinite series.

**Mathematics 423. Spherical Trigonometry. 1 hr.**  
 Pre-requisite, Mathematics 413. General properties of spherical triangles; solution of right and oblique spherical triangles; Napier's analogies. Practical applications.

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## MECHANICAL ENGINEERING.

Mr. Evans.

Mr. Gwiazdowski-Starr.

**Mechanical Engineering 411. 2 hrs.**  
**Elementary Mechanical Drawing.**

The reading of technical drawings, lettering, technical sketching, drawing board geometry, and simple working drawings.

**Mechanical Engineering 412. 3 hrs.**  
**Mechanical Drawing.**

Orthographic, oblique, and isometric projections, geometrical curves, and developments.

**Mechanical Engineering 422. 4 hrs.**  
**Engineering Mechanics, Statics.**

Bodies in equilibrium, simple structures, stress diagrams, framework, friction, center of gravity, centroids, suspended cables. Problems dealing with application of statics, graphical representation of shear and bending. MAURER'S TECHNICAL MECHANICS.

**Mechanical Engineering 423-424. Mechanism.**

A study of forms and motions of linkages, cams, gears, drafting room problems, involving valve gears, effects of acceleration, etc. DURLÉY'S KINEMATICS OF MACHINES.

**Mechanical Engineering 425-426. 6 hrs.**  
**Machine Drawing.**

Sketching, detailing, assembling, detailing from the layouts, fundamentals of machine design.

**Mechanical Engineering 427-428.****4 hrs.****Carpentry and Patternmaking.**

Lectures, recitations and actual construction of patterns and core boxes.

**Mechanical Engineering 429-430.****4 hrs.****Machine Shop.**

Chipping, filing, scraping, use of lathe, milling machine, shaper, drill press, etc. Lectures on modern shop practice, shop organization and management; problems relating to transmission of power, cutting feeds and speeds, etc.

**Mechanical Engineering 431. Foundry.****4 hrs.**

Lectures, recitations and actual practice in making cores, molds and pouring in the modern foundry. (The Ensign Foundry Co., Toledo.)

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**PHARMACY.****Mr. Reed.****Mrs. Liston.****Mr. Start.****Pharmacy 701-702. Theory and Practice of Pharmacy.**

A short study will be made of the history of Pharmacy, ancient and modern. The standard pharmacopœias and dispensaries of the different countries will be compared with a special study of the nomenclature of the U. S. Pharmacopœia, noting the recent changes and advancement made in the last decade. The student will be required to master the weights and measures, specific gravity and specific volume. He will be made acquainted with the processes of vaporization, distillation, sublimation, dessication, comminution, solution, filtration, percolation, crystallization, etc. The student after familiarizing himself with the foregoing, will take up the work of official pharmacy, with the systematic study of standard preparations under the heads of aquas, syrups, honeys, mucilages, emulsions, spirits, infusions, tinctures, fluid extracts, inorganic acids, preparations of the halogens, and finally, the study in detail of all the salts of the metals, beginning with the alkalies and their compounds. Each salt is carefully studied as to its official name, synonym, official description, purity rubric, solubility, tests for identity, impurities and tests for impurities, physiological properties, dose and antidote. This will complete the work of the year in theoretical pharmacy, having covered the work up to organic substances.

**Pharmaceutical Laboratory Work.**

The Laboratory work of the first year will accompany the lectures and recitations, and supply the practical aid to theoretical teaching. An obligatory list, consisting of 75 preparations, covering every phase of pharmaceutical work, is furnished each student and includes at least one preparation of each of the above named subjects, and will be made in the pharmaceutical laboratory, under the supervision of the director. These preparations are retained by the student until the end of the year, at which time they are carefully inspected and credit allowed. They are the property of the respective students and can be disposed of as they see fit.

The advantages gained by this laboratory work are two-fold. First, the student becomes perfectly familiar with the apparatus used in pharmaceutical work and the manipulation of the same, giving him a technical training, which contributes much to his success in the store. Second, it gives him the practical experience which enables him to judge quickly and accurately as to the best method of making the various pharmaceutical preparations, which work is one of the daily functions of a druggist. He is thereby enabled from the first to save the time and money which might be wasted in useless experimentation.

Material. Arrangements have been made whereby the students can purchase their crude material used in this department at a minimum price; the total expense of the work should not exceed \$10, and by students grouping together, it can be reduced nearly one-half. However, we do not urge such penurious economy as will lead to a slighting of the preparations.

Text-Book. Remington's Practice of Pharmacy. Latest edition.

For reference—U. S. Pharmacopœia, U. S. Dispensatory.

**Pharmacy 703-704.****Materia Medica.**

The course begins with a study of drugs under a systematic classification, arranged as follows: Therapeutical, Chemical, Physical and Botanical, including a table of therapeutical agents divided into parts, viz.: Internal remedies, external remedies, and agents which act upon organisms that infest the human body. Also a list of therapeutical agents defined as hematics, alteratives, anesthetics, antilithics, antiseptics, disinfectants, etc. Following this a list of Organic Chemicals will be considered under the heads of methane derivatives and benzene or aromatic derivatives. Then a study of synonyms so arranged as to aid the student when he enters the store to recognize the large number of preparations having the same composition, but under different trade names. Finally a study of the drugs themselves under their several groups or families.

Text-Books. Sayer's *Materia Medica*. Reference, U. S. P., and U. S. D.

**Pharmacy 705-706-707. Course of Botany and Pharmacognosy.**

This course in Botany will aim to give the student a thorough knowledge of the various forms of plant organs, their uses and variations, with their relation to other parts; so serving to familiarize him with the various terms used in technical description of the various drugs. The study of plant organs will be carried to completion with the aid of various drugs in fresh and dried state, and will be aided by drawing, etc.

**Vegetable Physiology.**

This course consists of the study of how the plant organs do their work, including the properties of Protoplasm. Constituents of plants. How they assimilate their food. The influence of light and temperature on the life of the plant. Movements, including sensitiveness of plants, sleep movements and growth. Reproduction, or the power which plants possess of giving rise to new individuals.

Laboratory work in connection with this course will be given in Histological Laboratory, under Plant Histology.

In Pharmacognosy, the study of drugs as to recognition and identification of the various official vegetable drugs will be taken up as well as the more important unofficial ones, and by the aid of commercial specimens, drawings, and illustrations, will aim to thoroughly familiarize the student with the drug, enabling him to recognize the specimens both in commercial and recent form, to differentiate between genuine and wrongly labeled drugs, and between good and poor specimens. This course will also treat of the active principles in relation to the drug itself, and to the fullest extent of the medicinal use and abuse of vegetable remedies. The habitat of the various drugs will be considered, together with the commercial sources, preservation, etc. The class will have access to the Herbarium of Drugs, which will give valuable aid to the student in this course.

Text-Books. Baston's *College Botany*. Sayer's *Materia Medica*.

**Pharmacy 708-709. Theory and Practice of Pharmacy.**

For our Senior work we have adopted the method in the outline as follows:

The opening lectures and recitations are devoted to lignin and its derivatives; then its isomer, starch and the allied products, gums, mucilages, etc.; then the sugars and the products derived from them as the result of decomposition and fermentation, alcohol, ether, etc., including the various synthetic products which are derived from organic bases or acids; following these the acid saccharine fruits with the important acids which they contain are considered, and then the products obtained from them and from other plants, i. e., volatile oils, oleo-resins, gum resins and balsams, naturally succeed these. Then the classification is based upon the prominent constituents, which are found in the substances, astringents, cathartics, etc. Drugs containing alkaloids are highly organized and most of them are powerful poisons. This plan thus begins with elementary substances like lignin, starch, and gum, and leads by regular progression to the most powerful compounds in the *materia medica*, Alkaloids.

The last half of the semester will be devoted to the study of Magistral Pharmacy, commencing with solid extemporaneous preparations under the following head: Powders, cachets, troches, pills and suppositories. The work of the year being completed by a thorough study and discussion of the various topics as follows: Dispensing and prescription work, which latter includes incompatibilities, best methods of filling, the

physician's directions, the ethics of the entire operation. Several hundred prescriptions, covering all phases of work done, will enter into this course, which will parallel the practical work in the free dispensary. Text-Books. Remington's Practice of Pharmacy, latest edition; Ruddyman's Incompatibilities in Prescriptions.

### Pharmaceutical Laboratory Work.

The laboratory work of the Senior course in most part differs widely from that of the first year. The first half of the semester will be devoted to the manufacture of several products which are found in the various chapters on Organic Pharmacy. A few are appended, viz.: Thymol Iodide or Aristol, Acetanilid, Chloroform, Castile Soap, etc. This work will parallel the theoretical work in organic chemistry.

This course includes the synthetical operations relative to the manufacture of organic Pharmaceutical compounds, and chemicals, viz.: Liquor Cresalis Comp. Sp. Aethen's Nitrosi, Sapo, Chloroformium, Sodoform, Urea, Salicylic Acid, Acetanilid, Terpin Hydrate, Methyl Salicylate, Thymal Iodide, Acetic Ether, etc. Together with experiments, relative to the compounds under the heads Paraffine, Alefine, and Aromatic Series of Hydrosobons, recovery of alcohol from gelenical preparations, etc. Following the above outline, the student will begin the study of Volumetric and Gravimetric analysis, including under this head the subjects of Qualitative and Quantitative Analysis. The detail of the work is as follows: A study of the abbreviations and signs of the various terms used in the work, viz.: Volumetric solutions, normal solutions, standard solutions, indicator, burette. Thence on the reading of instruments, methods of calculating results, and finally the practical work covering analysis of neutralization, as alkalimetry and acidimetry, analysis by precipitation, and estimation of the haloid salts, analysis by oxidation as estimation of the iron salts, including those made in the Junior year's work.

The work is concluded by a large number of assays as found in the U. S. P. latest revision, including the alkaloidal preparations made in the first year's course, estimation of sugars, sanitary analysis of water, etc.

Text-Books. Remington's Pharmacy, latest edition; Schimpf's Volumetric Analysis. Reference, U. S. Pharmacopoeia, U. S. Dispensatory.

### Pharmacy 710.

### Toxicology.

The course in Toxicology will embrace a general study of poisons, their effect upon the animal economy and their antidotes. A systematic classification of poisonous substances, which will aid in diagnosing and treatment.

A careful study of the more important poisons, with means for their identification and their chemical and physical antagonists.

Text-Book. Tanner.

## PHILOSOPHY.

### Philosophy 111.

### Modern Logic

3 hrs.

The logical thinker is in demand in all lines of work. Most of us tend not only to make serious mistakes in our thinking, but also to be misled by fallacies of others who intentionally or unintentionally mislead us. It is the aim of this course to help the student discover and incorporate in his own thinking the principles underlying efficient thought as well as to acquaint him with the mistakes and errors commonly made in our thinking.

### Philosophy 121.

### Introduction to Philosophy.

2 hrs.

All of us have been brought face to face with problems which the philosophers of this and other ages have endeavored to solve. It is the aim of this course to study some of the most important of these problems with a view to developing independent reflection and a sympathetic understanding of doctrines of the various schools of philosophical thought.

### Philosophy 131-132.

### History of Ancient

6 hrs.

### Philosophy.

A study of the most important philosophical systems of the ancient Greeks and Romans.

### Philosophy 141.

### Ethics.

3 hrs.

An introductory study of present-day problems of the moral life and of the principles needed for their satisfactory solution.

### Philosophy 147-148.

### Ancient Philosophy.

4 hrs.

(For description of course see Greek 147-148.)



**PHYSICAL EDUCATION.****Physical Education A.-B. Physical Education. 2 hrs.**

The course includes organized gymnasium work, games and competitive sports planned to keep the body in first-class condition.

**Physical Education 211-212. 2 hrs.****Elementary School Physical Training.**

Course arranged physiologically, progressing from lesson to lesson and grade to grade. Recreative and corrective Swedish gymnastics, rhythmic exercises, folk dances, games. Elementary School Course of Study in Physical Training.

Teaching of lessons.

**DEPARTMENT OF PHYSICS.**

Mr. Irvin.

**Physics 101-102. Elementary Physics. 6 hrs.**

For students lacking entrance credits in Physics and as an elective course for those completing their science requirements in chemistry or biology. The course is presented by means of two lectures, one recitation and two two-hour laboratory periods weekly. Demonstration apparatus will be used in connection with the lectures. Entrance credit will be given or the course may be taken as an elective for three credit hours each semester. Text Millikan and Gales Elementary Physics. (Revised edition).

**Physics 111. Household Physics. 3 hrs.**

This course is intended primarily for students interested in Domestic Science and kindred subjects. The course is presented by means of lectures, demonstrations and recitations. It covers the ground usually covered by elementary text-books, but differs from them in two ways; first, the illustrative examples and applications are taken largely from the home; second, the common system of weights and measures is used in addition to the metric system. The course is completed in one semester and should be followed by Biology. It may be taken as an elective for three credit hours or as a partial fulfillment of the science requirement for the Junior College Arts diploma.

Text. J. C. Lynde's Household Physics.

**Physics 121-122. General Physics. 10 hrs.**

This course is the regular course in college physics that meets the needs of the first or second year Arts and Science students. The course is presented by means of two lectures, two recitations, and one two-hour laboratory course weekly. The credit given will be four hours each semester. There is an additional requirement for those students entering without high school credits, which is one two-hour laboratory period throughout the year. This laboratory will be the equivalent of the elementary laboratory which accompanies Courses 1 and 2, with selected experiments from the advanced laboratory. This gives to those students who expect to teach physics in high school a knowledge and understanding of the elementary phases of the subject that necessarily must be emphasized in high school work. Text, Henry Crews, General Physics.

The laboratory is equipped with the latest apparatus necessary for the successful carrying out of all experiments as given in the revised edition of Millikan, Gale and Bishop's Laboratory Manual, as well as all apparatus for the more advanced courses as given by Millikan's Mechanics, Molecular Physics and Heat, also Millikan and Mills Electricity, Sound and Light.

**Physics 421. Mechanics and Heat. 5 hrs.**

Introduction to the subjects of mechanics, sound and heat. One-half the semester being devoted to mechanics. Special emphasis placed upon the solution of problems. Course designed to meet the needs of the sophomore students in engineering. Text, Reed and Guthe's College Physics.

**Physics 422. Electricity and Light. 5 hrs.**

Continuation of Course 421, covering magnetism, electricity and light. One-half the semester being devoted to electricity. Emphasis on problems. Text same as above.

**Physics 423-424. Physical Laboratory. 2 hrs.**

Laboratory course to accompany Physics 421-422. Required of all sophomore engineering students. Text, Miller's Laboratory Manual.

**POLITICAL SCIENCE.**

Mr. Leiserson.

**For Junior College and Evening Students.****Political Science 111. 3 hrs.****The Government of American Cities.**

Conditions and development of city life. Social groupings, problems of health, industry and government and the attempts to solve them. Organization and administration of city government. Municipal politics, finance and taxation. Public services, regulation, control and municipal ownership of public utilities.

**Political Science 112. 3 hrs.****American Federal and State Government.**

A general study of the American system of government. Political parties, political issues, national and local politics. Taxation and finance, regulation of commerce and business, protection of labor. Constitutional basis of personal and property rights.

**Political Science 121. 2 hrs.****European Governments and Parties.**

Survey of the systems of government in the principal countries of Europe. Nature and functions of European political parties. Current political questions.

**Political Science 122. The Government of Toledo. 2 hrs.**

Detailed study of the City Charter. Structure, organization and administration of Toledo's city government. Historical development of municipal problems and municipal functions in Toledo. Legal basis of City's rights, powers and duties.

**Political Science 123. Party Politics and Party Government. 2 hrs.**

Origin and development of political parties in the United States. Their organization and methods. Comparison with foreign political parties. Theory of the party system. Legal control over parties. Conventions, platforms, primaries, reform movements and measures.

**For Senior College Students.****Political Science 131. Principles of Politics. 3 hrs.**

General survey of field of political science. Origin, forms and functions of the state. Development of political thought. Constitutional law, liberty, sovereignty, justice, legislation, the suffrage.

**Political Science 141. 2 hrs.****The Relation of Government to Business.**

A study of the legal and political doctrines and administrative machinery that affect business enterprises. Charters and franchises. Rights, duties and privileges of corporations. Principles underlying regulation and control of business. Government activity in promoting and protecting business. The exercise of the police power over business. Public ownership and operation of industry.

**Political Science 142. 2 hrs.****Social and Economic Legislation.**

A study of the principles and practical administration of laws designed to protect weaker social groups and to improve economic and social conditions. Factory legislation, woman and child labor, hours of labor, minimum wage laws, workmen's compensation, health insurance, unemployment, Old Age and Mothers' Pensions.

**Political Science 147-148. 4 hrs.****Research and Thesis in Government.**

Detailed studies of special problems assigned for individual investigations. The work is done under direction of the University Municipal Reference and Research Bureau, and opportunities may be afforded to students to work directly in connection with city departments. Seminar and conferences to discuss methods and results of investigations.

**PSYCHOLOGY.**

Mr. Trettien.

Mr. Mallary.

**Psychology 111-112. Principles of Human Behavior. 4 hrs.**

The course aims to assist the student in determining the characteristic modes of human behavior; and the best methods of influencing those mental processes that determine effective behavior. Two semesters.

**Psychology 121-122. General Psychology. 6 hrs.**

The course aims to present in a systematic way the facts and principles of psychology. Two semesters.

**Psychology 123-124. Elementary Experimental Psychology. 2 hrs.**

The course is designed to familiarize the student with psychological apparatus, methods of procedure and interpretation of results of experimentation. It supplements Course 121 and should be taken with it. Two semesters.

**Psychology 131-132. Mental Tests and Measurements. 4 hrs.**

A study of the standard tests and measurements will be made, and the application in the testing of senses, perception, attention, imagery, association, reasoning, emotional and motor control and fatigue. Two semesters.

**Psychology 143-144. Clinical Psychology. 4 hrs.**

This course will present the various methods and principles of psychophysical analysis and will apply these to the study of normal, subnormal, exceptional, delinquent children. Practical work is done in connection with the city life. Two semesters.

**Psychology 146. Psychology of the Emotions. 2 hrs.**

A study of the nature and function of the instincts, feelings and emotions as they affect traits, temperaments and modes of human experience will be made. Second semester.

**Psychology 221. General Psychology. 3 hrs.**

This course aims to give a survey of the general field of psychology.

**Psychology 222. Educational Psychology. 3 hrs.**

The psychological basis of education will be presented. Pre-requisite, General Psychology.

**Psychology 231-232. Principles of Psychology. 4 hrs.**

The facts and principles of consciousness will be studied in a systematic way. Special topics will be investigated in order to determine psychological theories and technique.

**Psychology 242. Genetic Psychology. 2 hrs.**

The course aims to trace the fundamental principles of mental growth and development of the child and the race from infancy to maturity.

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**SECONDARY EDUCATION.****Secondary Education 231-232. 4 hrs.****Adolescence.**

A study of upper elementary and high school students for the purpose of becoming better acquainted with their mental, moral and physical capacities, traits and abilities. The course is planned to be of practical value to upper elementary and high school teachers.

**Secondary Education 233. 2 hrs.****Teaching High School Students How to Study.**

This course aims to do for the high school teacher what Course Elementary Education 233 does for the elementary school teacher.

Secondary Education 235-236.	4 hrs.
<b>High School Organization and Management.</b> The principles of organization and administration of the high school in its relation to adolescent development, to the elementary schools and university and to the social and economic conditions of the community will be considered.	
Secondary Education 241.*	3 hrs.
Principles and Observation of Teaching High School Mathematics.	
Secondary Education 242.*	3 hrs.
Supervised Teaching of High School Mathematics.	
Secondary Education 243.*	3 hrs.
Principles and Observation of Teaching High School Physics.	
Secondary Education 244.*	3 hrs.
Supervised Teaching of High School Physics.	
Secondary Education 245.*	3 hrs.
Principles and Observation of Teaching High School Chemistry.	
Secondary Education 246.*	3 hrs.
Supervised Teaching of High School Chemistry.	
Secondary Education 2417.*	3 hrs.
Principles and Observation of the Teaching of High School Psychology.	
Secondary Education 2418.*	
Supervised Teaching of High School Psychology.	
Secondary Education 2421.*	3 hrs.
Principles and Observation of the Teaching of High School English.	
Secondary Education 2422.*	3 hrs.
Supervised Teaching of High School English.	
Secondary Education 2431.*	3 hrs.
Principles and Observation of the Teaching of High School History.	
Secondary Education 2432.*	3 hrs.
Supervised Teaching of High School History.	
Secondary Education 2437.*	3 hrs.
Principles and Observation of the Teaching of High School Social Sciences.	
Secondary Education 2438.*	3 hrs.
Supervised Teaching of High School Social Sciences.	

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\*Offered at request of three students.



**SECRETARIAL ADMINISTRATION.****Mr. Ingersoll.****Sec. Adm. 321. Business Correspondence. 2 hrs.**

An accurate knowledge of English Grammar and Syntax assumed. While some attention will be given to sentence structure, punctuation and paragraphing, the course is designed primarily to qualify the student to construct an effective business letter. As the work proceeds, the various forms of business communications will be considered, students being trained not only to write such forms correctly and effectively, but to dictate them extemporaneously before the class upon assignments by the instructor in charge.

**Sec. Adm. 322. Office Systems and Practice. 2 hrs.**

Learning a position; meeting and talking with people; hiring and training office subordinates; correct handling of correspondence; filing of letters, invoices, orders, legal papers, contracts, etc.; the effective "follow up" campaign; systems of keeping sales records, employees' records, stock records, etc.

**SOCIOLOGY.****Mr. Nearing.****Mr. Colbert.****Sociology 111. Modern Social Problems. 2 hrs.**

A study of the chief social problems surrounding the family, the home, the school, the church, industry, the city and the state, with the relation of these social groupings and activities to the lives of people.

**Sociology 112. Social Evolution. 2 hrs.**

An examination of the forces that lead to social improvement and progress. The evolutionary principle is described in its relation to the social institutions considered in Sociology 111.

**Sociology 121. Principles of Sociology. 3 hrs.**

A study of the laws and principles underlying human society and association. Its general plan is to begin with the simplest and most direct form of social relations and proceed to the complex forms of modern life, studying the trend of social development. It includes a study of social conflicts; growth of population; growth of communication; social co-operation; social organization; the mores; social classes; social integration. Particular reference is made to the various theories of social progress. The course must be preceded by courses 111 and 112. Lectures; assigned readings; class discussions; and a semester thesis.

**Sociology 122. Social Achievement. 3 hrs.**

A practical application of the principles studied in the previous semester's work to the social life of Toledo. Lectures; assigned readings, class discussions; reports on assigned problems of city life.

**Sociology 131. Social Psychology. 2 hrs.**

A study of the growth and characteristics of the Social Mind. It includes an analysis of the fundamental human motives; the nature and force of suggestion; the crowd mind; the mob; the craze; the fad; purposive assemblies; conventionality; styles; custom imitation; discussion; leadership; social control. The works of Ward, Baldwin, MacDougal, Ellwood, Cooley, Tarde, Sumner, Gowin, and Ross are considered. Lectures; assigned readings; class discussions and a written semester thesis.

**Sociology 132. Public Opinion. 2 hrs.**

An analysis of the nature and elements of public opinion—the growth of public conscience, public judgment and public will; the influence of the individual conscience, judgment and will upon the public conscience and will; the agencies promoting or influencing public opinion; the role of customs, traditions, conventions; ideals and beliefs in the formation of public opinion; social values and social standards; problems of controlling and shaping public opinion; recent tendencies and recent developments; public opinion and democracy. Lectures; assigned readings; class discussions; and a semester thesis. The course must be preceded by Sociology 111, 112, 121, 122 and 131. (Courses in Psychology may fill the requirements for entrance to the course.)

**Sociology 141. Social Technique. 2 or 3 hrs.**

A study in the theory and practice of sociological investigation. It includes an analysis of the problems of collecting data; the science of investigation; the sources of information and how to use them; the social survey, its nature and function; reviews of some of the most noted surveys; study and practice in making surveys of the family, the neighborhood, the preliminary survey, and the special survey. Each student is expected to complete several studies of merit. Lectures; assigned readings; field work; round table discussions; reports. Open to students who have completed two or more courses in Sociology, and additional courses in political science and economics, or who have had considerable experience in practical social work.

**Sociology 142. Statistics. 2 hrs.**

A study in the theory and practice of statistics. It includes a history of the science of statistics; the preliminaries in collecting data; preparing schedules, avoiding and handling errors and the "personal equation;" tabulation; making deductions; presentation; graphic and pictorial methods of presenting statistical data. Lectures; readings; experimental problems; reports and round table discussions. Open to students having had Sociology 141 or experience in the practical field of social work or business.

**Sociology 211. Introduction to the Social Sciences. 3 hrs.**

This course consists of a description of the development of society from the primitive and simple to the complex life of today. It aims to acquaint the student with the various points of view and methods of approach to analyses of the social, economic, political and civic life in which they are expected to play their part. The evolution and development of the Social institutions—family, economic and industrial, political and civic, religious and moral, cultural and educational—and the influence which have molded them are points especially considered. The lectures are supplemented by text assignments and collateral readings and class discussions.

**Sociology 212. Introduction to the Social Sciences 3 hrs.  
(Continued.)**

With the background afforded by the first semester's work, this course is designed to acquaint the student with the most important problems confronting our social institutions today; the changes being made in these institutions; and the conditions and influences pressing and developing these changes. Each student is expected to get an introduction to the field of literature on these problems.

**Sociology 231-232. Sociology and Modern Social Problems. 4 hrs.**

This is a continuous course through both semesters and is planned especially for teachers in our public schools. It deals with the principles of social development; the growth and evolution of our social institutions and the problems which have arisen in them. Especial attention is paid to the changes which characterize the life of today and the part the teacher is to play in the directing and guiding of our social future. The course is conducted thru lectures, collateral readings and class discussions.

**SPANISH.****Mr. Pimienta****Spanish 101-102. Elementary Spanish. 6 hrs.**

The aim of this course is to teach students how to read and understand Spanish and to communicate their ideas in the Spanish language. Simple Spanish texts serve as the basis for class recitations and drills. The grammar of the language is studied with a view to strengthening other work of the course.

**Spanish 103-104. Intermediate Spanish. 4 hrs.**

The aim of this course is to develop fluency in speaking and rapidity in reading and writing Spanish.

**Spanish 301-302. Elementary Business Spanish. 4 hrs.****Spanish 303-304. Advanced Business Spanish. 4 hrs.**

**TRANSPORTATION.**

Mr. Kibler.

Mr. Fitzgerald.

**Transportation 321. American Transportation System. 2 hrs.**

An elementary course developing the American system of land and water transportation.

**Transportation 322, Regulation of Common Carriers. 2 hrs.**

A resume of federal, state, and municipal legislation designed to regulate the rates and services of common carriers.

**Transportation 331. Traffic Geography and Traffic Movements. 2 hrs.**

Sources of raw materials, movement of products, traffic associations, classification territories, and underlying principles of rate adjustments.

**Transportation 332. Railway Regulation. 2 hrs.**

An advanced course considering, among other subjects, the following: Theory and practice of rate-making; conditions necessitating federal and state regulation; the matter of federal v. state regulation of railways; legislation of federal and state governments affecting common carriers, amendments, interpretation by commissions and courts, and effect.

**Transportation 334. Traffic Management. 2 hrs.**

The organization and methods of a shipper's traffic department; the utilization of regular and special transportation services; the application of classifications and tariffs; the computation of rates; methods of procedure before the Interstate Commerce Commission and State Commissions.

# The College of Arts and Sciences

## THE ADMINISTRATIVE BOARD

A. MONROE STOWE, *President of the University.*

SCOTT NEARING, *Dean of the College.*

WM. M. LEISERSON, *Faculty Representative.*

## THE FACULTY

1916-1917.

A. MONROE STOWE, A. M., Ph. D.

908 Prospect Ave.

*President of the University and Professor of Education.*

Ph. B., 1903; A. M. 1904, Northwestern University; A. M., 1905, Harvard University; Ph. D., 1909, Columbia University. Instructor in Mathematics, Academy of Northwestern University, 1903-1904; Principal of Center School, Darien, Conn., 1906-1907; Principal, Training School, State Normal School, Hyannis, Mass., 1907-1909. Professor of the History and Philosophy of Education, State Normal College, Emporia, Kansas, 1909-1912; Supervisor of Practice, State Normal School, White-water, Wis., 1912-1913; Acting Professor of Education and Psychology, DePauw University, Greencastle, Ind., 1913-1914; Professor of Education and Acting President Toledo University, 1914-15; Professor of Education and President, Toledo University, 1915—

SCOTT NEARING, B. O., B. S., Ph. D.

831 Lincoln Ave.

*Dean of the College of Arts and Sciences and Professor of Economics and Sociology.*

B. O., 1904, Temple University; B. S., 1905, Ph. D., 1908, University of Pennsylvania. Acting Instructor in Sociology, Temple University, Philadelphia, 1904-1906; Instructor in Economics, University of Pennsylvania, Philadelphia, 1906-1914; Secretary Pennsylvania Child Labor Committee, 1905-1906; Acting Instructor in Economics, Swarthmore College, Swarthmore, Pa., 1908-1912; Assistant Professor in Economics, University of Pennsylvania, 1914-1915; Professor of Economics and Sociology and Dean of College of Arts and Sciences, Toledo University, 1915—

HAROLD S. COHN, M. D.

2046 Franklin Ave.

*Professor of Bacteriology and Immunology.*

M. D., 1912, Ohio Wesleyan University; Graduate Student at Chicago University in 1913 and 1914. Serologist, Michael Reese Hospital, Chicago, 1913-1914; Assistant to Dr. James Jobbling, Morris Institute, 1913; Instructor Post-Graduate Medical School, Chicago, 1914; Professor of Bacteriology and Serology, Toledo University, 1915—

OSCAR W. IRVIN, B. S.

5 Norwood Apts., 19th Street

*Professor of Physics.*

B. S., 1910, State University of Kentucky; Graduate Student at State University of Kentucky, 1911-12. Instructor of Physics, Sayre Institute, Lexington, Kentucky, 1910; Assistant in Physics, Kentucky State University, Lexington, Kentucky, 1910-1912; Professor of Physics, Toledo University, 1912—

ROBERT C. KISSLING, Ph. D.

1718 Madison Ave.

*Professor of Classical Languages and Literature.*

Diploma, 1898, Concordia College; Fellow in Greek in the University of Chicago, 1910-11; Ph. D., 1913, University of Chicago. Graduate Student in Philosophy and Education in the University of Chicago, Summer Quarter, 1913-1915; Principal Wittenberg Academy, 1912-13; Professor of the Classics and German, Toledo University, 1913-1916; Professor of the Classical Languages and Literatures, Toledo University, 1916—



HENRY R. KREIDER, A. B., A. M., Ph. D.

41 Homewood Ave.

*Professor of Classical Languages and Literatures.**Professor of Chemistry.*

A. B., 1898, Franklin & Marshall; A. M., 1901, Franklin & Marshall; Ph. D., 1910, Johns Hopkins University. Professor of Natural Sciences, Pennsylvania State Forest Academy, Mont Alto, Pa., 1905-07; Professor of Chemistry, Baltimore Medical College, Baltimore, Md., 1910-13; Assistant Professor of Chemistry, Carleton College, Northfield, Minn., 1913-15; Professor of Chemistry, Toledo University, 1915—

WILLIAM M. LEISERSON, A. B., Ph. D.

2421 Glenwood Ave.

*Professor of Political Science.*

A. B., 1908, University of Wisconsin; Ph. D., 1911, Columbia University. Expert, New York Commission on Employers Liability, Albany, N. Y., 1909-11; Deputy, Industrial Commission of Wisconsin, Madison, Wisconsin, 1911-14; Assistant Director United States Commission on Industrial Relations, Washington, D. C., 1914-15; Professor of Political Science and Director of Municipal Reference and Research Division of Public Service Bureau, Toledo University, 1915—

S. N. PIMIENTA, B. A., B. S.

233 White St.

*Professor of Romance Languages.*

B. A., B. S., Professor of Romance Languages, B. S., 1889, Paris, France; B. S., 1891, Madrid, Spain; B. A. 1895, Pisa, Italy; Assistant to Professor Dupont, University of Michigan, 1905-07; Professor of Romance Languages, State Normal College, Ypsilanti, Mich., 1907-09; Professor of Foreign Languages, Military College, Mexico City, Mexico, 1910-13; Professor of Romance Languages, Toledo University, 1914—

C. D. SELBY, M. D.

412 Potter St.

*Professor of Hygiene.*

M. D., 1902, Western Reserve University. Demonstrator in Histology, Western Reserve, 1901; Assistant to City Bacteriologist, Health Department, Cleveland, 1902; Commissioner of Health, Toledo, 1916—Director of University Public Health Laboratories and Professor of Hygiene, Toledo University, 1916—

AUGUSTUS W. TRETTEIN, A. B., Ph. D.

2208 Rosewood Ave.

*Professor of Psychology.*

State Normal School Diploma, 1894, Oshkosh, Wisconsin; B. L., 1899, University of Wisconsin; Ph. D., 1904, Clark University. Supervising Principal of Schools, Appleton, Wisconsin, 1894-1897; Professor of Psychology and Education, State Normal School, Oshkosh, Wisconsin, 1901-1907; Professor of Psychology and Education, University of South Dakota, 1907-1911; Associate Professor of Education and Supervisor of Student Teachers, University of Kansas, 1911-1914; Professor of Psychology, Drury College, 1914-1915; Lecturer in Education, summer sessions, University of Iowa, 1908; University of Missouri, 1910 and 1915, Kansas State Normal College, 1911, and University of Washington, 1913-1914; Professor of Psychology and Secondary Education and Acting-Dean, Teachers' College, Toledo University, 1915—

ROBERT NAYLOR WHITEFORD, A. B., A. M., Ph. D.

2252 Franklin Ave.

*Professor of English Literature and Director of Graduate Study.*

A. B., 1890, Wabash College; Graduate Student for two years in English, German and French at Wabash College; A. M., 1892, Wabash College; Graduate Student in English and French at the Johns Hopkins University, Oct. 1, 1892, to June, 1893; Ph. D., (in course) June, 1893, from Wabash College. Head of Department of English, Lake Forest Academy, Lake Forest, Illinois, 1893-1894; Head of Department of English, High School, Peoria, Illinois, 1894-1906; Professor English Language and Literature and Dean, American International College, Springfield, Mass., 1906-1908; Professor of English Literature, Toledo University, 1910—

DAVID W. HENRY, A. B., A. M.

465 Oakwood Ave.

*Associate Professor of Education.*

Massachusetts State Normal Diploma, 1909, State Normal School, Hyannis, Massachusetts; A. B., 1911, State Normal College, Emporia, Kansas; Graduate Student at Cornell University, 1912; A. M., 1915, Columbia University; Supervisors Diploma, 1916, Teachers' College, Columbia University. Supervisor of School Gardens, Hyannis, Mass.,

1908-09; Principal of North Center School, Norwalk, Conn., 1909-1910; Supervisor of Training School Gardens, Emporia, Kansas, 1910-1911; Principal of Rowayton School, Norwalk, Conn., 1911-1913; Instructor in Open Air School, Ethical Culture School, New York City, N. Y., 1913-1914. Assistant Professor of Education, Toledo University, 1914-15; Associate Professor of Education, Toledo University, 1915—

GLENN D. BRADLEY, A. B., A. M., Ph. D.

443 W. Bancroft St.

*Assistant Professor of History and Acting Professor of English.*

A. B., University of Michigan, 1907; A. M., University of Michigan, 1913; Ph. D., University of Michigan, 1915; Head Department of History, Leavenworth, Kansas, High School, 1909-1910; Principal Newton, Kansas, High School, 1910-1912; Instructor in English, University of Michigan, 1912-1914 and 1915-1916; Assistant in History, University of Michigan, 1914-1915; Assistant Professor of History and Acting Professor of English, Toledo University, 1916—

JOHN BRANDEEBERRY, A. B., A. M.

127 W. Bancroft St..

*Assistant Professor of Mathematics.*

B. S., 1913, Mount Union College, Alliance, Ohio; M. A., 1915, Ohio State University. Science Teacher, High School, Newberry, Michigan, 1913-14; Graduate Assistant in Mathematics, Ohio State University, 1914-1915; Assistant Professor of Mathematics, Toledo University, 1915—

CECIL YAMPOLSKY, B. S.

403 Winthrop St.

*Assistant Professor of Biology.*

B. S., Wisconsin, 1913; Graduate Student Columbia University, 1914-1917; Research Assistant in Botany, 1914-1916; Assistant in Botany, 1916-1917; Instructor in Extension Botany, 1916-1917, Columbus University; Assistant Professor of Biology, Toledo University, 1917—

ROY J. COLBERT, A. B.

1724 Washington St.

*Instructor in Sociology.*

A. B., 1914, DePauw University; Graduate Student in Sociology at University of Michigan, 1914, 1915, 1916, 1917. Assistant in Biology, DePauw University, Greencastle, Indiana, 1913-14; Instructor in Biology and Sociology, Toledo University, 1914-1916—

LOUIS P. EPSTEIN, B. S., B. D., A. M.

2210 Putnam St.

*Part-Time Instructor in Philosophy.*

MURIEL KINNEY, A. B., A. M.

2250 Glenwood Ave.

*Instructor in English. (\*)*

A. B., 1900, Western Reserve University; A. M., 1910, Columbia University. Principal and Teacher of English, School at Gray Gables, Cleveland, 1900-1909; Assistant in Short Story Course and History, Columbia University, 1909-10; Director of Reading Clubs, Cleveland Public Library, Cleveland, 1912-13; Preceptress and English Teacher, Bishopthorpe Manor, S. Bethlehem, 1914-15; Instructor in English, Toledo University, 1915—

(\*) Absent on leave.

PHILIP B. McDONALD, B. S., E. M.

2129 Monroe St..

*Instructor in English.*

Michigan College of Mines, 1910. B. S., E. M.; Engineering work and Journalism, 1911-1915; Assistant Editor "Mining and Scientific Press," San Francisco, 1915-1916; Instructor in English, Toledo University, 1917—

BENJAMIN E. MALLARY, A. B.

1608 Jefferson Ave.

*Instructor in Economics and Psychology.*

A. B., 1914, Kansas State Teachers' College, Emporia, Kansas; Graduate Student at University of Michigan, 1914-17; Principal Public School, Millington, N. J., 1912-13; Assistant in Psychology, Kansas State Normal School, Emporia, 1913-14; Instructor in Economics, Political Science and Psychology, Toledo University, 1914—

ERNEST REY, B. A.

2024 Glenwood Ave..

*Instructor in German.*

B. A., Ohio State University, 1915; Graduate Student Ibid, 1915-1916. Instructor in French, Antioch College, Yellow Springs, Ohio, 1913-1914; Assistant Instructor in German, Ohio State University, 1914-1916; Instructor in German and French, Toledo University, 1916—

### THE WORK OF THE ARTS COLLEGE.

The Arts College originally included within its course of study all of the work in mathematics, philosophy, language, law and medicine. Through the years of educational change, the old Arts College course has been subdivided. At Toledo University there are six Colleges: the College of Arts and Science, the College of Commerce and Business, the College of Industrial Science, the College of Law, the College of Pharmacy, and the Teachers College. Each of these Colleges has a specialized field into which students go for a special training. The field of the Arts College is more general, and in a sense more fundamental than the work of the other Colleges since it underlies and precedes the specialized courses which they offer.

The professions are becoming yearly more exacting in the standard of education upon which they insist. Students who intend to specialize in professional work should familiarize themselves with the broad fields of human knowledge and possess themselves of the tools of learning without which a successful specialized training is impossible. Many students find it impossible to take four years of Arts work in addition to their professional training. All students would do well to take at least two years of Arts work in preparation for their chosen specialized courses. Specialization is essential. At the same time it is only one factor in a life that should be rounded to meet all phases of the problem of existence. The general work offered in the Arts College furnishes a foundation for the work which the other colleges do.

Nor should this Arts training be narrowed in the direction of the particular vocation toward which the student is aiming. Rather it should be broadened in other directions, and aim to give the student an ability to appreciate the spiritual and cultural values in life; to understand the past and bring its lessons to bear upon the life of the present, to grasp the wider problems of existence and employ his chosen calling as a means to secure and enjoy a rounded life.

The Toledo University, as a Municipal Institution, owes to every student who enters its doors, a training that will make for efficient citizenship. The democracy, a government by discussion, will stand or fall in proportion as citizens are intelligent or unintelligent in deciding the important questions of public policy that must constantly come before them.

The Municipal College of Arts and Science, supported by the city in order to afford men and women of all classes an equal educational opportunity is responsible, in a peculiar sense for this citizenship training. The Arts College has attempted to meet this responsibility through the Junior College,—which aims,

1. To give the student a mastery over his own body and mind,
2. To supply the student with the power to communicate with his fellows,
3. To acquaint the student with his surroundings, and
4. To familiarize the student in so far as time will permit with the past, with the physical world and with the world of thought.

Efficient citizenship is the frank aim of this Junior College course.

### OPPORTUNITIES OPEN TO ARTS COLLEGE STUDENTS.

Students must not infer that because the Arts College offers many general courses, and because its work is less specialized than the work of the other Colleges, that the Arts College student has nothing ahead of him when he leaves the Arts College. On the contrary, students who take four years of regular Arts work covering a broad and general field for the first two years, and confining themselves to a major subject during the last two years of their Arts College work, find numerous attractive opportunities for exercising their talents in fields that lie outside of the range of the work of other Colleges. Some of the most vital



opportunities of modern life are open to those who have taken the training which the Arts College offers.

Men and women who take up work in the Arts College may look forward to opportunities,—

1. As Students and Teachers of the Liberal Arts.
2. As Scientific Experts.
3. In Public Administration and Public Service.
4. In Social Service.
5. In Labor Organization and Administration.

### THE OPPORTUNITIES BEFORE STUDENTS AND TEACHERS OF THE LIBERAL ARTS.

The broadest function of the Arts College is the training of students in the liberal Arts. Men and women wish to know the world in which they live; they wish to understand the past, interpret the present, and foresee the future; they desire to acquaint themselves with the science, philosophy and literature in which are written the annals of human achievement; they expect to live and to mingle with their fellows, and they are eager to grasp as much of the hidden meaning of life as the knowledge of the world permits. Men and women with such ambitions are prepared to spend four years in the pursuit of a number of general courses that in their entirety constitute what is commonly called a liberal education.

A liberal education need not be followed merely for its own sake. There is a steady demand for teachers of language and literature, natural science, social science, education, psychology and philosophy. Publishing houses, editorial rooms, magazines and newspapers are in constant need of men whose general education enables them to write with conviction and power; to criticize and to interpret. The printed page has never occupied the position that it holds today through all of the ages during which it has been a factor in human progress. The lecture platform never offered a better chance than it does now. Thousands of men and women who can speak with authority are being listened to by millions of eager souls that are seeking the true way.

The Liberal Arts training offers an avenue through which students, teachers, publicists, and other professional men and women may add to their equipment a touch of the general, cultural life that marks the difference between the trained and the educated human being.

### THE OPPORTUNITY FOR SCIENTIFIC EXPERTS.

One of the leading English statesmen is reported to have said prior to the outbreak of the great war in Europe, that the next war would be won by the nation that knew the most about chemistry and physics. The activities on the European battle fronts, on the high seas, and in the laboratories and factories of the belligerents demonstrated very soon after the outbreak of the great war that this prophecy was sound. Applied Science played an immense part in every phase of the war business.

Fortunately, wars are only occasional. The achievements of scientific experts are featured dramatically in war time. Though less spectacular, they are even more important in times of peace.

Modern industry is built upon applied science and the scientific point of view dominates the industrial world. The industrial manager is constantly on the look-out for something newer and better. He is anxious to change, where change means the advancement of his business. For these changes he looks in large measure to the scientific expert. Most large manufacturing plants are today equipped with testing and experimental laboratories in which are quartered scientific experts whose duty



it is to find a better way. There has not been a time during the last generation when the supply of such experts equalled the demand.

The Toledo University offers unusual opportunities for the training of the scientific expert. The course which it offers in Bacteriology, Biology, Geology, Chemistry, Physics, Physiology and Zoology, provides the requisite theoretical training, supplemented by laboratory experiments. The University Public Health Laboratories enable the student to avail himself of numerous opportunities for learning his science at the same time that he serves the community. Again, Toledo is the seat of a large number of manufacturing industries whose plants offer splendid facilities for the first hand study of the needs of the Scientific Expert in industry.

During recent years the question of Public Health has received well deserved attention throughout the civilized world. Preventive measures have decreased death rates and lightened the burden of sickness, and almost eliminated the frightful plagues that formerly swept over the earth. Today there is not a prominent city without its Public Health Officials and its Public Health Laboratories. Again the demand for trained men has outrun the supply. Competent experts in public health work are constantly called for.

The classes and laboratory work, and the University Public Health Laboratories give the student at Toledo University unusual opportunities to secure the necessary training in health work.

#### OPPORTUNITIES IN PUBLIC ADMINISTRATION AND PUBLIC SERVICE.

The College of Arts and Sciences also aims to provide the special training necessary to prepare students to enter the Public Service. Experts are increasingly in demand in all branches of public administration. Courses given by the social science departments will familiarize the student with the processes of government and the problem with which they have to deal. In co-operation with the College of Commerce and the College of Industrial Science the student is offered opportunities to prepare himself for the technical and business branches as well as for the purely political departments of the service. The University's Municipal Reference and Research Bureau offers an excellent laboratory for students desiring training for the public service.

#### OPPORTUNITY FOR TRAINING IN SOCIAL SERVICE.

One of the most interesting trends in our social and civic life is the constant and growing demand for trained social service experts. Every session of our legislatures adds to the demand; and municipalities, chambers of commerce, business and civic organizations and private philanthropies are constantly employing trained social service workers.

The supply of this growing profession must come from one of two sources; (1) From ranks of the trained workers who have received their training from experience in lesser positions in social service; (2) From those who have been trained in the schools of civics and philanthropy or in the social science departments of the universities and colleges.

Toledo University, in its various social science departments and in its Public Service Bureau, offers a special opportunity to the student wishing to prepare himself or herself for a position in Social Service. The work is so planned that those who are now actively engaged in some line of social work can take advantage of the courses of study or the seminar classes. For those who desire to take up the training, and have had no experience, arrangements are made with the various organizations and agencies of the city whereby the study and class work is supplemented with practice and experience.

## OPPORTUNITIES IN LABOR ORGANIZATION AND ADMINISTRATION.

The labor movement is rapidly taking its place as one of the most potent forces of the industrial world. The Industrial Revolution, bringing in its train the labor-saving machine, the factory, the industrial city, rapid transportation and communication, and the vast mechanism of present day finance, has substituted minutely sub-divided and highly specialized tasks for the old-time crafts and trades, at the same time imposing on the human race an economic system under which a labor movement was inevitable.

The modern labor movement is a product of the past hundred years. The more aggressive phases of the movement have developed during the past fifty years. In all of the countries that have become industrial, the labor movement is a recognized part of the social machinery.

Among all of the vital public questions that confront the world today, none are more important than the questions involving the control of industry and the apportionment of income. Every community that pretends to democracy has witnessed conflict on this head. Democracy—government by discussion—will be called upon to solve these vast public questions and the labor movement must be recognized as one of the large factors in this democratic discussion. Indeed, from the standpoint of numbers, the wage-earners and clerks in the modern industrial community constitute about five-sixths of the gainfully employed population.

The labor movement is making a constant demand for leaders and organizers. Each local union, chapter, or association must have its quota of officers. Committees, such as shop committees, publicity committees, and the like, require special equipment; there is a steady demand for organizers—locally and in the field; and the movement is in continual need of men and women who can speak and write effectively.

The demand for training in this field is a pressing one. It grows more insistent as the years go by.

The training of leaders for the labor movement has heretofore been left to haphazard. The time has come when the same educational intelligence that is devoted to the development of business leaders must be devoted to the education of labor leaders. Indeed, the need is, if anything, more pressing since so little educational progress has been made heretofore in the latter direction.

A Municipal University situated in a great industrial center like Toledo, seems to be the logical place for pioneer training of men and women who are to carry on the work of labor leaders and organizers, and a course has been designed which would enable young men and women who are preparing themselves for active participation in the labor movement, to secure, during two or four years of evening work, a well-rounded preparation for successful participation in the activities of the labor world.

The work is organized under the Extension Division of the Arts College. Students who desire to pursue it are permitted to waive the entrance requirements prescribed for regular college students.

### THE DIVISION OF THE COLLEGE OF ARTS AND SCIENCES.

There are four Divisions of the Arts College—

1. The Junior College Division
2. The Senior College Division.
3. The Graduate Division.
4. The Extension Division.

Each of these divisions is designed to meet the needs of a particular group of students.

## THE JUNIOR COLLEGE.

### The Aim of the Junior College.

Recognizing the fact that a large number of students in a city college will be able to remain in college only two years, the Municipal College of Arts and Sciences has organized its work into two college divisions, referred to as the Junior and Senior Colleges. The aim of the Junior College is to familiarize the student with the most important phase of his modern urban environment, as well as to introduce him to the important lines of human thought and endeavor with which the studies in the Senior College deal more intensively. Too often the student who has completed two years of college work feels that his studies have taken him nowhere. The student who completes two years of work in the Municipal College leaves his college better prepared to meet the social, economic and political problems which will confront him better prepared to render intelligent service to his fellow citizen.

### Diploma of the Junior Arts College.<sup>1</sup>

The diploma of the Junior Arts College will be conferred upon students who have satisfactorily completed the following requirements:—

- (1) Six semester hours of work in the department of English.
- (2) Thirty-six semester hours which must comprise twelve hours of required work in at least two departments of each of the following group,—
  - (a) Languages, Literature and Philosophy,—Including the Departments of English, English Literature, French, German, Greek, Latin, Spanish and Philosophy.
  - (b) Natural Science,—Including the Departments of Bacteriology, Biology, Chemistry, Hygiene, Mathematics, Physics, and Psychology.
  - (c) Social Science,—Including the Departments of Economics, Education, History, Political Science and Sociology.
- (3) Eighteen semester hours of elective work in the College of Arts and Science, fifteen hours of which may be in other Colleges or College Divisions of the University, subject to the approval of the faculty of the College of Arts and Sciences.
- (4) Two semester hours of work in the Department of Physical Training.

## THE SENIOR COLLEGE.

### The Aim of the Senior College.

While the aim of the Junior College of Arts and Sciences is to familiarize the student with himself, his college and his urban environment and to develop in him an interest in the various lines of human thought and achievement, the aim of the Senior College is to help the student make a more intensive study of the problems in a few of these lines.

A second aim of the Senior Municipal College is to give the student training in performing service for the municipality which has provided the educational opportunities which he has enjoyed. Candidates for the Bachelor of Arts degree are therefore required to do an assignment

<sup>1</sup>Required Courses 1917-18:

The following courses will be required of all individuals for the diploma in 1917-1918: Economics 111, Education 111-112, English 111-112, History 122-124, Literature 111-112, Political Science 112, Sociology 111-112, Physical Training A1, B1, A2, B2, either Biology 121-122, Chemistry 111-112, Hygiene 111-112, or Physics 121-122.

Elective Courses:

The student is required to take a sufficient number of College of Arts and Sciences courses to bring the total number of credits up to sixty semester hours.

The student may, if he desires, submit fifteen semester hours of credit secured in courses offered in other colleges or college divisions of the University.



of work for the city or to perform some task in which a fairly large percentage of the citizens will be interested. In this work the student is supposed to apply in the service of the city or of his fellow citizens the knowledge which he has gained in his major study. In the work of both Junior and Senior Colleges the student is constantly dealing with vital problems and facts connected with the life and activities of citizens of Toledo. The holder of the diploma has prepared himself for intelligent citizenship, while the Bachelor of Arts has prepared himself to be of service to his fellow citizens, and has demonstrated his ability to be of such service.

### Requirements for A. B. Degree, 1921<sup>1</sup>.

Toledo University offers opportunities for a full four-year Arts College Course. On satisfactory completion of 122 semester hours in addition to Physical Training, under the regulations prescribed below, the student will be recommended for the degree of Bachelor of Arts.

1. Seventy-two hours of required work which must comprise twenty-four hours of required work in at least two departments of each of the following groups:
  - a. Languages, Literature and Philosophy,—including the departments of English, English Literature, French, German, Greek, Latin, Spanish and Philosophy, provided that six semester hours of work shall be satisfactorily completed in the department of English.
  - b. Natural Science,—including the Departments of Bacteriology, Geology, Chemistry, Hygiene, Mathematics, Physics, and Psychology.
  - c. Social Science,—including the Departments of Economics, Education, History, Political Science and Sociology.
2. Forty-eight semester hours of elective work in the College of Arts and Science, subject to the approval of the faculty of the College of Arts and Sciences.
3. Two semester hours of work in the Department of Physical Training.
4. One major and two minor to be selected not later than the time when the student begins work in the Senior College. A major consists of eighteen semester hours of work in one department in which the candidate shall also do a piece of constructive work for the municipality or shall complete a task which shall be of interest and value to the Citizens of Toledo to be approved by the head of the Department, the Dean of the College and the President of the University. The minors consist of twelve semester hours each in the College of Arts and Science courses in two departments, one of which may be the department in which the major work is being done.
5. Of the total of 122 hours of work required for the Bachelor of Arts degree as high as 30 hours may be satisfactorily completed in courses offered by other Colleges of the University, subject to the approval of the faculty of the College of Arts and Sciences.
6. Students who have satisfactorily completed 92 hours of work in the College of Arts and Sciences as specified under "Requirements for Graduation" may be granted the A. B. Degree from Toledo University upon satisfactorily completing thirty hours of a professional course in a recognized professional school or college, subject to the approval of the faculty of the College of Arts and Sciences.

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<sup>1</sup>Requirements for A. B. Degree, 1917 to 1920 inclusive:

1. A Junior College Arts diploma, or certification that the student has satisfactorily completed the courses of study required for graduation from the Junior College of Toledo University.
2. A major, consisting of eighteen semester hours of work in the College of Arts and Sciences courses in one department.
3. Two minors, consisting of twelve semester hours each in the College of Arts and Sciences courses in two departments one of which may be the department in which the major work is being done.
4. Elective work to make the total number of semester hours of College credit one hundred and twenty hours.



## THE GRADUATE DIVISION.

### Aims of the Graduate Division.

Certain courses offered in the Arts College are open to Graduate Students. The Graduate Division of the College is organized to supervise and direct the work of these students.

Many students who have completed their undergraduate course in Toledo University desire to pursue further studies along lines in which they have become particularly interested. Teachers and other professional people who have done their undergraduate work in other institutions are anxious to continue in the direction of their professional need.

To all such persons the Graduate Division offers an opportunity for more extensive and specialized study than is possible under the conditions surrounding Undergraduate Life.

### Requirements for Degree of Master of Arts.

1. While students holding an A. B. degree may be registered as undergraduate students in the College of Arts and Sciences, only such work as is accomplished by them as graduate students will be credited toward the Master of Arts degree.
2. Students possessing an A. B. degree from Toledo University or any other standard college or university, desiring to be classified as graduate students, should make formal application for such classification. Blank forms may be secured from the University secretary. The application, together with credentials, should be sent or presented to the Director of Graduate Study at least one week before registration.
3. Candidates for the degree of Master of Arts, in addition to having fulfilled the requirements for the A. B. degree from Toledo University, must have satisfactorily completed at least thirty hours of work in not more than two departments of the College of Arts and Sciences beyond the work required for the Arts degree. In addition to the courses in their major work, which must be in the department of their under-graduate major, they must do an assignment of work which will be of interest or value to the city or to a fairly large percentage of its citizens. The finished product of the work must be such as to win the approval of the majority of the committee composed of the professor in charge of the work, the Director of Graduate Study and the President of the University. In their minor subject they must complete at least twelve hours of work in Junior, Senior and Graduate Arts courses, which in the catalog are numbered from 131 to 159 and from 1301 to 1599.
4. Work to be satisfactorily completed must be of a grade "A" or "B" as given in the colleges of the University.

## THE EXTENSION DIVISION.

### Aims of the Extension Division.

The Extension Division of the Arts College is designed to meet the needs of those people who have no desire to pursue University work for the purpose of securing credit towards a college degree, but who wish to keep in touch with the progress of the world. Discoveries are being made, theories are being proposed, research and investigation are bringing to light facts which revolutionize human thought. People who have graduated from college in the busy, workaday world, as well as people who have never been to College are desirous of availing themselves of an opportunity to hear and discuss the new ideas in various scientific fields.

The Extension Division aims to provide for the needs of these people.

There are on the staff of Toledo University a number of men and women who have devoted their lives to study along special lines. In the surrounding institutions there are numbers of other instructors who are

being brought in from time to time to assist in the work of the Arts College. The Extension Division is attempting to bring together the people outside of the University who wish to learn, and the people inside of the University who are anxious to teach.

### The Work of the Extension Division.

The Extension Division of the Arts College is working along two distinct lines. On the one hand, it is seeking to bring students into the Extension classes held by instructors in the University; on the other hand, it is seeking to send instructors out into the Community wherever there is a group of citizens desiring such a service.

A number of Extension Classes are conducted each year at the University. During the year of 1916-1917 these classes began November 13th, 1916, and ended March 30th, 1917. As the classes ran through the holidays each class had twenty sessions. The subjects chosen for the sessions were, Psychology, Problems of the Day, Economics, Debating and History.

The courses were designed to be interesting as well as instructive. As most of the students who registered for the courses spend much of their time in making a living, no previous academic training was demanded for admission into any of the courses. Those who registered were expected, however, to have a serious interest in the work and to attend classes with reasonable regularity.

After each lecture there was an opportunity for questions and for free discussions. The Instructors sought in all classes to enlist the sympathy and co-operation of the students.

A series of extension classes similar in form, but along slightly different lines has been outlined for the sessions of 1917-1918.

The other branch of work carried on by the Extension Division consists of a Speakers' Bureau which, under the supervision of the directors of the Division, is prepared to advise with any group of people in the city who desire one or a series of lectures to suggest subjects and so far as possible to supply the needs of the organization from among the College Faculty.

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<b>Bacteriology 131.</b>	<b>General Bacteriology.</b>	<b>3 hrs.</b>
	H. Cohn, first semester, Monday, Wednesday, 10:25-12:10.	
<b>Bacteriology 132.</b>	<b>Advanced Bacteriology.</b>	<b>3 hrs.</b>
	H. Cohn, first semester, Monday, Wednesday, 10:25-12:10.	
<b>Biology 121.</b>	<b>General Botany.</b>	<b>2 or 3 hrs.</b>
	Yampolsky, first semester, first section, Monday, 4:05-5:45 p. m.;	
	second section, Monday, Wednesday, Friday, 10:25-11:15 a. m.	
<b>Biology 122.</b>	<b>General Zoology.</b>	<b>2 hrs.</b>
	Yampolsky, second semester, first section, Monday, 4:25-5:45 p. m.;	
	second section, Monday, Wednesday, Friday, 10:25-11:15 a. m.	
<b>Biology 123.</b>	<b>Botany Laboratory.</b>	<b>2 hrs.</b>
	Yampolsky, first semester, first section, Saturday, 8:05-12:00;	
	second section, Thursday, 1:05-5:00.	
<b>Biology 124.</b>	<b>Zoology Laboratory.</b>	<b>2 hrs.</b>
	Yampolsky, second semester, first section, Saturday, 8:05-12:00;	
	second section, Wednesday, Friday, 1:10-3:50.	
<b>Biology 131.</b>	<b>Invertebrate Zoology.</b>	<b>2 hrs.</b>
	Yampolsky. Time to be arranged.	
<b>Biology 132.</b>	<b>Plant Physiology.</b>	<b>2 hrs.</b>
	Yampolsky. Time to be arranged.	

<b>Biology 133.</b>	<b>Laboratory to Accompany Biology 131.</b>	<b>2 hrs.</b>
	Yampolsky. Time to be arranged.	
<b>Biology 134.</b>	<b>Laboratory to Accompany Biology 132.</b>	
	Yampolsky. Time to be arranged.	
<b>Biology 141-142.</b>	<b>Cytology. (Lectures and Laboratory.)</b>	<b>10 hrs.</b>
	Yampolsky. Time to be arranged.	
<b>Chemistry 101-102.</b>	<b>Introduction to Inorganic Chemistry.</b>	<b>4 hrs.</b>
	<b>(Lectures.)</b>	
	Kreider, first and second semesters, Monday, Friday, 7:05-8:00 p. m.	
<b>Chemistry 103-104.</b>	<b>Introduction to Inorganic Chemistry.</b>	<b>4 hrs.</b>
	<b>(Laboratry.)</b>	
	Kreider, first and second semesters, Monday, Friday, 8:00-10:00 p. m.	
<b>Chemistry 111.</b>	<b>General Inorganic Chemistry. (Lectures.)</b>	<b>3 hrs.</b>
	Kreider, first semester, Monday, Wednesday, Friday, 8:00-8:50 p. m.	
<b>Chemistry 112.</b>	<b>Qualitative Analysis. (Lectures.)</b>	<b>3 hrs.</b>
	Kreider, second semester, Monday, Wednesday, Friday, 8:00-8:50 a. m.	
<b>Chemistry 113.</b>	<b>Laboratory Work to Accompany Chemistry 111.</b>	<b>2 hrs.</b>
	Kreider, first semester, Monday, Wednesday, 1:10-3:55 p. m.	
<b>Chemistry 114.</b>	<b>Laboratory Work to Accompany Chemistry 112.</b>	<b>2 hrs.</b>
	Kreider, second semester, Monday, Wednesday, 1:10-3:55 p. m.	
<b>Chemistry 121.</b>	<b>Quantitative Analysis (Lectures).</b>	<b>1 hr.</b>
	Kreider, first semester, Tuesday, 11:20-12:10 p. m.	
<b>Chemistry 122</b>	<b>Quantitative Analysis (Lectures).</b>	<b>2 hrs.</b>
	Kreider, second semester. Time to be arranged.	
<b>Chemistry 123.</b>	<b>Laboratory Work to Accompany Chemistry 121.</b>	<b>3 hrs.</b>
	Kreider, first semester, Tuesday, Thursday, 8:55-12:00 m.	
<b>Chemistry 124.</b>	<b>Laboratory Work to Accompany Chemistry 121.</b>	<b>3 hrs.</b>
	Kreider, second semester, Monday, Wednesday, 1:10-4:50 p. m.	
<b>Chemistry 131-132.</b>	<b>Organic Chemistry</b>	<b>4 hrs.</b>
	Myers, first section, both semesters, 10:25-11:15 a. m., Tues., Thurs.	
	Kreider, second section, both semesters. Time to be arranged.	
<b>Chemistry 133-134.</b>	<b>Laboratory to Accompany Chemistry</b>	<b>4 hrs.</b>
	<b>131-132.</b>	
	Kreider, both semesters. Time to be arranged.	
<b>Chemistry 141-142.</b>	<b>Advanced General Chemistry.</b>	<b>4 hrs.</b>
	Kreider, both semesters, Wednesday, Friday, 11:20-12:10.	
<b>Economics 111.</b>	<b>Modern Economic Problems.</b>	<b>2 hrs.</b>
	First semester, Tuesday, Thursday, 10:25-11:15 a. m.	
<b>Economics 112.</b>	<b>The Industrial System.</b>	<b>2 hrs.</b>
	Second semester, Tuesday, Thursday, 10:25-11:15 a. m.	
<b>Economics 121.</b>	<b>Principles of Political Economy.</b>	<b>2 hrs.</b>
	First semester, Wednesday, 4:05-5:45 p. m.	
<b>Economics 122.</b>	<b>Monopolies and Trusts.</b>	<b>2 hrs.</b>
	Second semester, Wednesday, 4:05-5:45 p. m.	
<b>Economics 131.</b>	<b>Wage Theories.</b>	<b>2 hrs.</b>
	First semester, Wednesday, 7:00-9:00 p. m.	

<b>Economics 132.</b>	<b>Labor Problems.</b>	<b>2 hrs.</b>
	Second semester, Wednesday, 7:00-9:00 p. m.	
<b>Economics 141.</b>	<b>Interpretation of Social Facts.</b>	<b>2 hrs.</b>
	First semester, Friday, 4:05-5:45 p. m.	
<b>Economics 142.</b>	<b>History of Economic Thoughts.</b>	<b>2 hrs.</b>
	Second semester, Tuesday, 4:05-5:45 p. m.	
<b>Economics 149.</b>	<b>Social Science Seminar.</b>	<b>2 hrs.</b>
	Time to be arranged.	
<b>Education 111.</b>	<b>Principles of Human Behavior.</b>	<b>2 hrs.</b>
	Stowe, first semester, Tuesday, Thursday, 8:55-9:45 a. m.	
<b>Education 112.</b>	<b>College and University Education.</b>	<b>2 hrs.</b>
	Stowe, second semester, Tuesday, Thursday, 8:55-9:45 a. m.	
<b>English 111-112.</b>	<b>English Composition.</b>	<b>2 hrs.</b>
	Both semesters, Monday, Wednesday, Friday, 10:25-11:15 a. m.	
<b>English 133-134.</b>	<b>The Short Story.</b>	<b>4 hrs.</b>
	Both semesters, Tuesday, 4:05-5:45 p. m.	
<b>English Lit. 111-112.</b>	<b>Modern American and English Literature.</b>	<b>4 hrs.</b>
	Whiteford, both semesters, Tuesday, Thursday, 11:20-12:30.	
<b>English Lit. 121-1222.</b>	<b>A Comparative Study of Modern Drama I.</b>	<b>4 hrs.</b>
	Whiteford, both semesters, Monday, 7:10-9:00 p. m.	
<b>English Lit. 123-124.</b>	<b>General Survey of English Literature I.</b>	<b>4 hrs.</b>
	Whiteford, both semesters, Saturday, 8:55-9:45 a. m.	
<b>English Lit. 127.</b>	<b>The Romantic Movement.</b>	<b>2 hrs.</b>
	Whiteford, first semester, Tuesday, Thursday, 10:25-11:15 a. m.	
<b>English Lit. 128.</b>	<b>Tennyson-Browning-Arnold.</b>	<b>2 hrs.</b>
	Whiteford, second semester, Tuesday, Thursday, 10:25-11:15 a. m.	
<b>English Lit. 135-136.</b>	<b>Shakespeare's Tragedies.</b>	<b>3 hrs.</b>
	Whiteford, both semesters, Monday, Wednesday, Friday, 11:20-12:10.	
<b>English Lit. 137-138.</b>	<b>American Literature.</b>	<b>4 hrs.</b>
	Whiteford, both semesters, Tuesday, Thursday, 4:05-4:55 pp. m.	
<b>English Lit. 141-142.</b>	<b>English Fiction I.</b>	<b>6 hrs.</b>
	Whiteford, both semesters, Monday, Wednesday, Friday, 10:25-11:15 a. m.	
<b>English Lit. 143-144.</b>	<b>The English Drama.</b>	<b>6 hrs.</b>
	Whiteford, both semesters, Monday, Wednesday, Friday, 4:05-4:55 p. m.	
<b>English Lit. 155-156.</b>	<b>Chaucer.</b>	<b>4 hrs.</b>
	Whiteford or Kinney. Time to be arranged.	
<b>English Lit. 157-158.</b>	<b>Seminar in English Fiction.</b>	<b>2 to 4 hrs.</b>
	Whiteford, first and second semesters. Time to be arranged.	
<b>French 101-102.</b>	<b>Elementary French.</b>	<b>6 hrs.</b>
	Pimienta, both semesters, Monday, Wednesday, Friday, 4:05-4:55 p. m.	
<b>French 103-104.</b>	<b>Intermediate French.</b>	<b>2 hrs.</b>
	Pimienta, both semesters, section 1, Tuesday, Thursday, 2:05-2:55 p. m.	
	Section 2, Tuesday, Thursday, 4:05-4:55 p. m.	



<b>French 105-106.</b>	<b>Conversational French.</b>	<b>2 hrs.</b>
	Pimienta, both semesters, Tuesday, 2:05-2:55 p. m.	
<b>French 111-112.</b>	<b>Romantic and Modern Writers.</b>	<b>6 hrs.</b>
	Rey, both semesters, Monday, Wednesday, Friday, 11:20-12:10.	
<b>French 121.</b>	<b>Seventeenth Century Tragedy.</b>	<b>3 hrs.</b>
	Rey, first semester, Monday, Wednesday, Friday, 12:15-1:05 p. m.	
<b>French 122.</b>	<b>Seventeenth and Eighteenth Century Comedy.</b>	<b>3 hrs.</b>
	Rey, second semester, Monday, Wednesday, Friday, 12:15-1:05 p. m.	
<b>German 101-102.</b>	<b>Elementary German.</b>	<b>8 hrs.</b>
	Rey, both semesters, Tuesday, Thursday, 4:05-6:45 p. m.	
<b>German 103.</b>	<b>Intermediate German.</b>	<b>3 hrs.</b>
	Rey, first semester, Monday, Wednesday, Friday, 8:05-8:55.	
<b>German 104.</b>	<b>Classical German.</b>	<b>3 hrs.</b>
	Rey, second semester, Monday, Wednesday, Friday, 8:05-8:55.	
<b>German 106.</b>	<b>Scientific German.</b>	<b>3 hrs.</b>
	Rey, second semester, Monday, Wednesday, Friday, 11:20-12:10.	
<b>German 111-112.</b>	<b>Classical, Romantic and Modern Writers.</b>	<b>6 hrs.</b>
	Rey, both semesters, Monday, Wednesday, Friday, 11:20-12:10.	
<b>German 121-122.</b>	<b>Nineteenth Century Drama.</b>	<b>4 hrs.</b>
	Rey, both semesters, Tuesday, Thursday, 11:20-12:10.	
<b>German 131-132.</b>	<b>Goethe and Schiller.</b>	<b>4 hrs.</b>
	Rey, both semesters, Tuesday, Thursday, 11:20-12:10.	
<b>German 141-142.</b>	<b>Introduction to German Dramatic Literature.</b>	<b>4 hrs.</b>
	Kissling, Monday, Friday, 5:00-5:50 p. m.	
<b>Greek 111-112.</b>	<b>Elementary Greek.</b>	<b>2 or 3 hrs.</b>
	Kissling, section 1, both semesters, Monday, Wednesday, Friday, 8:55-9:45 a. m.	
	Section 2, both semesters. Time to be arranged.	
<b>Greek 113-114.</b>	<b>Elements of New Testament Greek.</b>	<b>2 hrs.</b>
	Kissling, both semesters. Time to be arranged.	
<b>Greek 121.</b>	<b>Xenophon's Anabasis.</b>	<b>2 or 3 hrs.</b>
	Kissling, first semester, Tuesday, Thursday, 11:20-12:10.	
<b>Greek 127.</b>	<b>Ancient Mythology.</b>	<b>1 hr.</b>
	Kissling, first semester, Tuesday, 7:10.	
<b>Greek 137-138.</b>	<b>Greek Literature in English.</b>	<b>2 or 4 hrs.</b>
	Kissling, section 1, both semesters, Tuesday, Thursday, 10:25-11:15 a. m.	
	Section 2, Wednesday, 2:05-2:55 p. m.	
<b>Greek 151.</b>	<b>Plato's Republic.</b>	<b>2 hrs.</b>
	Kissling, first semester, Wednesday, 4:05-5:45 p. m.	
<b>History 113-114.</b>	<b>General American History. 1760-1860.</b>	<b>6 hrs.</b>
	Bradley, first and second semesters, Monday, Wednesday, Friday, 11:20-12:10.	
<b>History 122.</b>	<b>Recent American History. 1877-1917.</b>	<b>3 hrs.</b>
	Bradley, second semester, Monday, Wednesday, Friday, 8:55-9:45.	
<b>History 124.</b>	<b>Modern Europe and Her Problems, 1815 to the Present Time.</b>	<b>3 hrs.</b>
	Bradley. First Semester. Monday, Wednesday, Friday, 8:55-9:45.	

History 131.	Colonial America, 1492-1760.	3 hr.
	Bradley. First Semester. Time to be arranged.	
Hygiene 111.	Hygiene and Sanitation.	2 hrs.
	First Semester. Tuesday, Thursday, 11:20-12:10.	
Hygiene 112.	Social Hygiene.	2 hrs.
	Second Semester. Tuesday, Thursday, 11:20-12:10.	
Latin 101-102.	Elementary Latin.	4 hrs.
	Kissling. Both Semesters. Section 1, Tuesday, Thursday 8:55-9:45 A. M. Section 2, Tuesday, Thursday, 4:05-4:55 P. M.	
Latin 111.	Cicero's De Senectute and De Amicitia	3 hrs.
	Kissling. First Semester. Monday, Wednesday, Friday, 11:20-12:10.	
Latin 112.	Ovid's Metamorphoses.	2 hrs.
	Kissling. Second Semester. Monday, Wednesday, Friday, 11:20-12:10.	
Latin 113.	Livy.	2 hrs.
	Kissling. First Semester. Monday, Wednesday, Friday, 10:25-11:15.	
Latin 114.	Horace's Odes.	2 hrs.
	Kissling. Second Semester. Monday, Wednesday, Friday, 10:25-11:15.	
Latin 115.	Practical Latin Course.	1 hr.
	Kissling. First Semester. Time to be arranged.	
Latin 142.	Lucretius's De Rerum Natura.	2 hrs.
	Kissling. First Semester. Tuesday, 5:05-6:45.	
Math. 111.	College Algebra.	3 hrs.
	Brandeberry. First Semester. Time to be arranged.	
Math. 112.	Analytical Geometry.	3 hrs.
	Brandeberry. Second Semester. Time to be arranged.	
Math. 113.	Plane Trigonometry.	2 hrs.
	Brandeberry. First Semester. Tuesday, Thursday, 11:20-12:10.	
Math. 114.	Analytical Geometry.	5 hrs.
	Brandeberry. First Semester. Mon., Tues., Wed., Thurs., Fri., 11:20-12:10 A. M.	
Math. 115.	Plane and Spherical Trigonometry.	3 hrs.
	Brandeberry. First Semester. Time to be arranged.	
Math. 121.	Differential Calculus.	5 hrs.
	Brandeberry. First Semester. Tues., Wed., Thurs., Fri., 11:20-12:10 A. M.	
Math. 122.	Integral Calculus.	5 hrs.
	Brandeberry. Second Semester. Mon., Tues., Wed., Thurs., Fri., 10:25-11:15 A. M.	
Phil. 111.	Modern Logic.	3 hrs.
	Time to be arranged.	
Phil. 121.	Introductory to Philosophy.	3 hrs.
	Time to be arranged.	
Phil. 141.	Ethics.	3 hrs.
	Time to be arranged.	
Physics 101-2.	Elementary Physics.	3 hrs.
	Hours arranged by Conference.	
Physics 111.	Household Physics.	2 hrs.
	Irvin. First Semester. Monday, 4:05-5:05.	

<b>Physics 121-122.</b>	<b>General Physics.</b>	<b>5 hrs.</b>
Irvin. Both Semesters. Monday, Wednesday, Thursday, Friday, 10:25-11:15. Laboratory, Tuesday, 8:05-12:00.		
<b>Physical Ed. A.</b>	<b>Physical Education.</b>	<b>1 hr.</b>
First Semester, Tuesday, 2:05-3:45.		
<b>Physical Ed. B.</b>	<b>Physical Education.</b>	<b>1 hr.</b>
Second Semester. Tuesday, 2:05-3:45.		
<b>Political Sc. 111.</b>	<b>The Government of American Cities.</b>	<b>3 hrs.</b>
Leiserson. First Semester. First Section, Monday, Wednesday, Friday, 8:55-9:45 A. M. Second Section, Thursday, 7:10-9:00 P. M.		
<b>Political Sc. 112.</b>	<b>American Federal and State Government.</b>	<b>3 hrs.</b>
Leiserson. Second Semester. First Section, Monday, Wednesday, Friday, 8:55-9:45 A. M. Second Section, Thursday, 7:10-9:00 P. M.		
<b>Political Sc. 121.</b>	<b>European Governments and Parties.</b>	<b>2 hrs.</b>
Leiserson. First Semester. Wednesday, 4:05-5:55 P. M.		
<b>Political Sc. 122.</b>	<b>The Government of Toledo.</b>	<b>2 hrs.</b>
Leiserson. Second Semester. Monday and Thursday, 5:00-5:55.		
<b>Political Sc. 141.</b>	<b>The Relation of Government to Business.</b>	<b>2 hrs.</b>
Leiserson. First Semester. Monday and Thursday, 5:10.		
<b>Political Sc. 131.</b>	<b>Principles of Politics.</b>	<b>3 hrs.</b>
Leiserson. First Semester. Tuesday, 7:10-9:00 P. M.		
<b>Political Sc. 142.</b>	<b>Social and Economic Legislation.</b>	<b>2 hrs.</b>
Leiserson. Second Semester. Tuesday, 7:10-9:00 P. M.		
<b>Psychology 111-112.</b>	<b>Principles of Human Behavior.</b>	<b>4 hrs.</b>
Mallary. Both Semesters. Tuesday, 7:10-9:00 P. M.		
<b>Psychology 121-122.</b>	<b>General Psychology.</b>	<b>6 hrs.</b>
Trettien. Both Semesters. Monday, Wednesday, Friday, 8:00-8:55.		
<b>Psychology 123-124.</b>	<b>Elementary Experimental Psychology.</b>	<b>2 hrs.</b>
Mallary. Both Semesters. Time to be arranged.		
<b>Psychology 131-132.</b>	<b>Mental Tests and Measurements.</b>	<b>4 hrs.</b>
Trettien. Both Semesters. Wednesday, 4:05-5:45.		
<b>Psychology 143-144.</b>	<b>Clinical Psychology.</b>	<b>4 hrs.</b>
Trettien. Both Semesters. Saturday, 9:10-11:00.		
<b>Psychology 146.</b>	<b>Psychology of the Emotions.</b>	<b>2 hrs.</b>
Trettien. Time to be arranged.		
<b>Sociology 111.</b>	<b>Modern Social Problems.</b>	<b>2 hrs.</b>
Colbert. First Semester. Section 1, Tuesday and Thursday, 8:00-8:50. Nearing. Section 2. Time to be arranged.		
<b>Sociology 112.</b>	<b>Social Evolution.</b>	<b>2 hrs.</b>
Colbert. Second Semester. Tuesday and Thursday, 8:00-8:50 A. M.		
<b>Sociology 121.</b>	<b>Principles of Sociology.</b>	<b>3 hrs.</b>
Colbert. First Semester. Monday, Wednesday, Friday, 10:25-11:15 A. M.		
<b>Sociology 122.</b>	<b>Social Achievement.</b>	<b>3 hrs.</b>
Colbert. Second Semester. Monday, Wednesday, Friday, 10:25-11:15 A. M.		

<b>Sociology 131.</b>	<b>Social Psychology.</b>	<b>2 hrs.</b>
	Colbert. First Semester. Monday, 7:10-9:00 P. M.	
<b>Sociology 132.</b>	<b>Public Opinion.</b>	<b>2 hrs.</b>
	Colbert. Second Semester. Monday, 7:10-9:00 P. M.	
<b>Sociology 141.</b>	<b>Social Technique.</b>	<b>2 hrs.</b>
	Colbert. First Semester. Friday, 4:10-5:45 P. M.	
<b>Sociology 142.</b>	<b>Statistics.</b>	<b>2 hrs.</b>
	Colbert. Second Semester. Friday, 4:10-5:45 P. M.	
<b>Spanish 101-102.</b>	<b>Elementary Spanish.</b>	<b>6 hrs.</b>
	Pimienta. Both Semesters. Section 1, Monday, Wednesday, Friday, 8:55-9:45 A. M.	
	Section 2, Monday, Wednesday, Friday, 5:00-5:50 P. M.	
<b>Spanish 103-104.</b>	<b>Intermediate Spanish.</b>	<b>4 hrs.</b>
	Pimienta. Both Semesters. Section 1, Tuesday, Thursday, 5:00-5:50 P. M.	
<b>Spanish 106.</b>	<b>Conversational Spanish.</b>	<b>3 hrs.</b>
	Pimienta. Both Semesters. Wednesday, 8:30-9:30 P. M.	



# Teacher's College

## ADMINISTRATIVE BOARD.

A. MONROE STOWE,  
*President of the University.*

A. W. TRET TIEN,  
*Acting Dean.*

JOSEPHINE LEACH,  
*Faculty Representative.*

## COURSE OF STUDY ADVISORY COMMITTEE.

PROFESSOR A. W. TRET TIEN.  
ASSOCIATE PROFESSOR HENRY.  
ASSOCIATE PROFESSOR LEACH.

## THE FACULTY.

1916-1917.

A. MONROE STOWE, A. M., Ph. D. 908 Prospect Ave.  
*President of the University and Professor of Education.*

Ph. B., 1903, A. M., 1904, Northwestern University; A. M., 1905, Harvard University; Ph. D., 1909, Columbia University; Instructor in Mathematics, Academy of Northwestern University, 1903-1904; Principal of Center School, Darien, Conn., 1906-1907; Principal, Training School, State Normal School, Hyannis, Mass., 1907-1909; Professor of the History and Philosophy of Education, State Normal College, Emporia, Kansas, 1909-1912; Supervisor of Practice, State Normal School, White-water, Wis., 1912-1913; Acting Professor of Education and Psychology, DePauw University, Greencastle, Ind., 1913-1914; Professor of Education and Acting President Toledo University, 1914-15; Professor of Education and President, Toledo University, 1915—

A. W. TRET TIEN, A. B., Ph. D. 2208 Rosewood Ave.  
*Acting Dean and Professor of Psychology and Secondary Education.*

State Normal School, School Diploma, 1894, Oshkosh, Wisconsin; B. L., 1899, University of Wisconsin; Ph. D., 1904, Clark University; Supervising Principal of Schools, Appleton, Wisconsin, 1894-1897; Professor of Psychology and Education, State Normal School, Oshkosh, Wisconsin, 1901-1907; Professor of Psychology and Education, University of South Dakota, 1907-1911; Associate Professor of Education and Supervisor of Student Teachers, University of Kansas, 1911-1914; Professor of Psychology, Drury College, 1914-1915; Lecturer in Education, summer sessions, University of Iowa, 1908; University of Missouri, 1910 and 1915; Kansas State Normal College, 1911, and University of Washington, 1913-1914; Professor of Psychology and Secondary Education and Acting-Dean Teachers' College, Toledo University, 1915—

DAVID W. HENRY, A. B., A. M. 465 Oakwood Ave.  
*Associate Professor of Education.*

Massachusetts State Normal Diploma, 1909, State Normal School, Hyannis, Massachusetts; A. B., 1911, State Normal College, Emporia, Kansas; Graduate Student at Cornell University, 1912; A. M., 1915, Columbia University Supervisor's Diploma, 1916, Teachers' College, Columbia University; Supervisor of School Gardens, Hyannis, Mass., 1908-1909; Principal of North Center School, Norwalk, Conn., 1909-1910; Supervisor of Training School Gardens, Emporia, Kansas, 1910-1911; Principal of Rowayton School, Norwalk, Conn., 1911-1913; Instructor in Open Air School, Ethical Culture School, New York City, N. Y., 1913-1914; Assistant Professor of Education, Toledo University, 1914-1915; Associate Professor of Education, Toledo University, 1915—

## Aims and Organization of

## THE TEACHERS' COLLEGE OF TOLEDO UNIVERSITY.

The Teachers' College of Toledo University was established by the Board of Directors of the University in 1916 as a College for teachers, the function of which should be to assist the teachers of Toledo and vicinity in their endeavors to increase their efficiency as teachers as well as to furnish an opportunity for students desiring to enter the teaching profession to secure a superior professional training.

The Teachers' College of Toledo University is organized into the Junior College and Senior College Divisions.

Through its Junior College Division, the Teachers' College aims to do the following things for the student who plans to become a secondary school teacher:

1. To familiarize the student with himself and with the principles which applied make for increased student efficiency;
2. To familiarize the student with the ideals and work of ancient and modern institutions of higher learning, including those institutions established for the training of secondary school teachers;
3. To awaken an intelligent interest in modern urban social, economic, and political problems, and their evolution in order that the student may appreciate the social significance of the work of high schools and of secondary school teachers;
4. To acquaint the student with the fundamental laws of mental activity and with the principles of teaching which applied make for efficient teaching; and
5. To supervise the prevocational and avocational, as well as vocational studies of its students.

Through its Senior College Division, the Teachers' College aims:—

1. To be of service to the teachers of Toledo in their endeavors to increase their efficiency as teachers and to broaden their horizon as citizens, and
2. To train teachers for secondary school positions.

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RELATION OF THE TEACHERS' COLLEGE TO THE TEACHER TRAINING WORK OF THE STATE.

While the Teachers' College is one of the colleges of a Municipal University, its work is of interest to the State in view of the fact that the graduates of this College will become teachers in the schools of the State. In the organization and work of its various college divisions the Teachers' College has therefore aimed to fulfill the maximum requirements and suggestions of the State Department of Public Instruction and has been approved by that Department. Those who fulfill the requirements for the B. S. degree in education are eligible as candidates, either for the high school provisional certificate or for the elementary provisional certificate.

The following regulations of the State Department of Public Instruction are of interest to students contemplating becoming candidates for either of the provisional certificates:

Four-year state provisional certificates are granted by the Superintendent of Public Instruction. The provisional certificates are elementary, high school, or special.

"Only graduates of approved colleges or normal schools may be granted provisional certificates by the Superintendent of Public Instruction. A list of colleges and schools approved for preparation for the several provisional certificates is made by the Superintendent of Public Instruction. An applicant for such a certificate must also be a graduate of a first grade high school or have the equivalent of that work, besides the college and normal work detailed below for the several certificates.

"The fee for a state provisional certificate of any kind is One Dollar. The fee will be returned if the application is rejected. Application must be made on a form which is furnished by the Superintendent of Public Instruction. The application accompanied by the fee, and by a detailed transcript of credits from the college or normal school upon graduation from which the application is based, is to be filed with the Superintendent of Public Instruction, Columbus, Ohio.

"All state provisional certificates are valid for four years in any school district in the State. After twenty-four months of successful teaching on such certificate the holder may secure from the State Board of School Examiners by appearing before them at the time of the semi-annual meeting, and upon furnishing the evidence and paying the fee as stated above, a life certificate of like kind without examination.

"Elementary provisional certificates are granted only to those who complete a two years' course and secure a diploma from an approved institution for the training of teachers.

"High School provisional certificates are granted only to holders of degrees from approved institutions for the training of high school teachers.

"A fee of twenty-five cents is charged for a duplicate of a state provisional certificate lost by the holder."

### REGULAR STUDENTS.

Students who have satisfactorily met the entrance requirements of the college division in which they are registered are classified as regular students. (See. p. 71.)

### SPECIAL STUDENTS.

Persons over twenty-one years of age may be admitted into the Junior and Senior College Divisions of the Teachers' College as special students, provided they give evidence that they are able to carry on the work in a satisfactory manner. Such special students may later be admitted as regular students upon meeting the requirements for admission as such. In all such cases credits of a grade of A or B may be accepted toward meeting the requirements for the diploma of the Junior College or for the degree of Bachelor of Science in Education.

### CHANGES IN REGISTRATION.

After the student has been registered no changes in registration will be allowed without the consent of the Administrative officer indicated below:

In the Junior Teachers' College Division it will be necessary to secure the written consent of the Chairman of the Course of Study Advisory Committee.

In the Senior College Division it will be necessary to secure the written consent of the Dean of the College.

Requests for such consent must be in the prescribed form of petition and must be endorsed by the instructors of the courses involved.

### SUPERVISED TEACHING.

All supervised teaching in the secondary school field is done under the direction of the Professor of Secondary Education in the second semester of the student's Senior year, the first semester of which the student must enroll in the Principles and Observation of the subject which he desires to teach the second semester. For more detailed information concerning this work and its prerequisites confer with the Professor of Secondary Education.

## THE JUNIOR COLLEGE DIVISION OF THE TEACHERS COLLEGE.

## The Junior College Diploma.

The diploma of the Junior College Division of the Teachers College will be conferred upon regular students who—

1. Have satisfactorily completed required courses and a sufficient number of other courses chosen with the approval of the Course of Study Advisory Committee to bring the total number of semester hours of credit up to sixty, and
2. Have given evidence of possessing those necessary intellectual, physical and personal traits, capacities and abilities which in the judgment of the Faculty of the Teachers College make for success in teaching.

## Required Courses.

Education 213.	Principles of Human Behavior.	2 hrs.
Education 214.	College and University Education.	2 hrs.
English 211.	Practical English.	2 hrs.
English 212.	Practical English.	2 hrs.
Sociology 211.	Introduction to the Social Sciences.	6 hrs.
Psychology 221.	Elements of Psychology.	3 hrs.
Education 222.	Principles of Teaching.	3 hrs.
History 231.	Modern European History.	2 hrs.
History 232.	Modern European History.	2 hrs.
Electives		36 hrs.

(Chosen with approval of Course of Study Advisory Committee.)

## THE SENIOR COLLEGE DIVISION OF THE TEACHERS COLLEGE.

## Admission Requirements Regular Students.

To be admitted as a regular student and candidate for the degree of Bachelor of Science in Elementary Education, the student is required to furnish evidence of having been graduated either

- (a) from a standard normal school, or
- (b) from the Normal Training Division of the Teachers College.

To be admitted as a regular student and candidate for the degree of Bachelor of Science in Secondary Education, the candidate is required to furnish evidence of having been graduated from the Junior College Division of the Teachers College or of having met the requirements for graduation from the Junior College Division of the Teachers College.

## Degree of Bachelor of Science (in Education).

The University confers the degree of Bachelor of Science (in Elementary Education or in Secondary Education) to regular students who have successfully completed the course of study required by the Teachers College for that degree either in the field of elementary education or in that of secondary education.



### Requirements for the Degree of Bachelor of Science in Elementary Education.

For the degree of Bachelor of Science (in Elementary Education), the student is required to complete 124 hours of work of a college grade, sixty of which have been completed in either the Normal Training Division of the Teachers College or in a standard two-year normal school; the other sixty-four to include—

1. A major of 24 hours in the Department of Elementary Education which shall include two courses in Elementary Education 241 to 249, and one course in Elementary Education 251 to 259.
2. A minor of twelve hours in the Departments of Education and Psychology of the Teachers College.
3. A minor of twelve hours in Social Sciences.
4. Free electives, sixteen hours, in any one of the Departments of the University.

### Requirements for the Degree of Bachelor of Science in

#### Secondary Education.

For the degree of Bachelor of Science (in Secondary Education) the student is required to complete 124 semester hours of work of College grade which shall include sixty hours required for graduation from the Junior College Division of the Teachers College and 64 hours of work satisfactorily completed under the supervision of the Senior College Division of the Teachers College. The 124 semester hours of required work for the degree shall include

1. A major of eighteen hours in the Department of Secondary Education which shall include courses 235 and 236, two principles of teaching high school subject courses and one course in supervised teaching of one of those subjects.
2. Sixteen hours in the Teachers College courses in Education, Elementary Education or Psychology which shall include Education 233-234 and Education 243-244.
3. A major of eighteen hours in any University Department outside of the Departments of Education.
4. A minor of twelve hours in any University Department outside of the Departments of Education, and the Department in which the major work is done.
5. A minor of twelve hours in the Social Sciences.

The courses leading to the degree of Bachelor of Science in Secondary Education have been approved by the State Department of Public Instruction, so that students receiving this degree are eligible to receive the State provisional certificate to teach, which under certain regulations of the State Department of Public Instruction is convertible into a life certificate to teach in the State of Ohio.

### ANNOUNCEMENT OF THE COURSES TO BE OFFERED IN THE TEACHERS COLLEGE.

1917-18

Education. 211.	Principles of Human Behavior.	2 hrs.
Henry, First Quarter, First Semester, T., W., T., F., 8:00-8:50.		
Education 212.	Modern Educational Problems.	2 hrs.
Henry, Second Semester, T., T., 8:00-8:50.		

Education 213.	Principles of Human Behavior.	2 hrs.
	Stowe, First Semester, T., T., 8:55-9:45 A. M.	
Education 214.	College and University Education.	2 hrs.
	Stowe, Second Semester, T., T., 8:55-9:45.	
Education 223-224.	History of Modern Elementary Education.	4 hrs.
	Henry, Both Semesters, Sat., 8:00-9:45 A. M.	
Education 226.	Principles of Teaching.	3 hrs.
	Henry, Second Semester, M., W., F., 8:55-9:45.	
Education 233-234.	History of Modern Education.	4 hrs.
	Henry, Both Semesters, Sat., 10:25-12-10.	
Education 235-236.	Educational Magazine Club.	2 hrs.
	Henry, Both Semesters, Wed., 4:05-5:00.	
Education 241.	Supervision of Class-room Instruction.	2 hrs.
	Henry, First Semester, Tues., 4:05-5:45 P. M.	
Education 242.	School Administration.	2 hrs.
	Henry, Second Semester, Tues., 4:05-5:45 P. M.	
Education 243.	Principles of Education.	2 hrs.
	Henry, First Semester, M., 4:05-5:45.	
Education 244.	Principles of Education.	2 hrs.
	Henry, Second Semester, M., 4:05-5:45.	
Education 247-248.	Social Education.	4 hrs.
	Stowe, Both Semesters, W., 4:05-5:45.	
Elementary Education 231.	Child Study.	2 hrs.
	Henry, First Semester, Thurs., 4:05-5:45.	
Elementary Education 233.	Increasing Teaching Efficiency.	2 hrs.
	Henry, First Semester. (Time to be arranged.)	
English 211-212.	Practical English.	4 hrs.
	Both Semesters, T., T., 10:25-11:15 A. M.	
History 211.	American History.	3 hrs.
	Bradley or Henry, First Semester, M., W., F., 10:25-11:15 A. M.	
History 231-232.	Modern European History.	4 hrs.
	Bradley, Both Semesters, Section 1, T., T., 11:20-12-10; Section 2, Fri., 4:50-5:45.	
History 235-236.	Current Events Magazine Club.	2 hrs.
	Bradley, Both Semesters, W., 5:00-5:50.	
Psychology 221.	General Psychology.	3 hrs.
	Trettien, First Semester, M., W., F., 8:00-8:50.	
Psychology 222.	Educational Psychology.	3 hrs.
	Trettien, Second Semester, M., W., F., 10:05-11:15.	
Psychology 231-232.	Principles of Psychology.	4 hrs.
	Trettien, Both Semesters, T., 4:05-5:45.	
Psychology 242.	Genetic Psychology.	2 hrs.
	Trettien. (Time to be arranged.)	
Secondary Education 231-232.	Adolescence.	4 hrs.
	Trettien, Both Semesters, Thurs., 4:05-5:45.	

**Secondary Education 235-236.**

**4 hrs.**

**High School Organization and Management.**

Trettien, Both Semesters, Fri., 4:05-5:45.

**Sociology 211-212.**

**6 hrs.**

**Introduction to the Social Sciences.**

Colbert, Both Semesters, M., W., F., 11:20-12:10.

**Sociology 231-232.**

**4 hrs.**

**Sociology and Modern Social Problems.**

Colbert, Both Semesters, Sat., 10:25-12:10.

# The College of Commerce and Business

## ADMINISTRATIVE BOARD.

1916-1917.

A. MONROE STOWE, *President of the University.*

T. L. KIBLER, *Dean of the College.*

J. ANDERSON FITZGERALD, *Faculty Representative.*

## THE FACULTY.

A. MONROE STOWE, A. M., Ph. D.

908 Prospect Ave.

*President of the University.*

THOMAS L. KIBLER, Ph. D.

423 Victoria Place

*Dean College of Commerce and Business and*

*Professor of Transportation.*

A.B. 1904, Randolph Macon College; M.A. 1908, Ph.D. 1913, George Washington University; Graduate Student, George Washington University, 1907-9, 12-13; Berlin and Heidelberg Universities, 1909-10; The University of Chicago, 1910-11. Professor of Economics, LaSalle Extension University, 1910-11; Assistant Professor of Economics, Agricultural and Mechanical College of Texas, 1913-14, and Professor of Economics, 1914-16; Dean, College of Commerce and Business, Toledo University, 1916—.

J. ANDERSON FITZGERALD, A. M.

*Assistant Professor of Commerce.*

A.B. 1901, Georgetown College, Georgetown, Ky.; A.M. 1907, University of Chicago; Graduate Student, University of Chicago, Summer sessions, 1910-15. Instructor Marshall College, State Normal School, Huntington, W. Va., 1902-07; Head of the Department of History and Economics, 1908-11; Instructor in Commercial Practice and Statistics, Carnegie Institute of Technology, Pittsburg, 1911-17; Assistant Professor of Commerce, Toledo University, 1917—.

BENJAMIN E. MALLARY, A. B.

1608 Jefferson Ave.

*Instructor in Marketing.*

A.B. 1914, Kansas State Teachers' College, Emporia, Kans.; Graduate Student at University of Michigan, 1914-17. Principal Public School, Millington, N. J., 1912-13; Assistant in Psychology, Kansas State Normal School, Emporia, 1913-14; Instructor in Economics, Political Science and Psychology, Toledo University, 1914—.

J. HOWARD KRAMER

2503 Vermont Ave.

*Part-time Instructor in Accounting.*

W. M. INGERSOLL

1803 Monroe St.

*Part-time Instructor in Secretarial Administration.*

## THE COLLEGE OF COMMERCE AND BUSINESS.

The College of Commerce and Business was established by the Board of Directors of the University in order to offer opportunities for professional business training, (1) to all those young men and women who desire a broad, fundamental business training in preparation for a business career, and (2) to those in business desiring to prepare themselves for larger and more effective service.

### Day Classes.

Day classes in systematic business courses leading to the Bachelor of Science degree are available September, 1917. A liberal elective system will permit students to specialize in the following fields: Accounting,



Banking, Business Administration, Marketing (Advertising and Salesmanship), Secretarial Administration, and Transportation. This specialization begins in the second year of the course in General Business Administration and becomes more pronounced during the third and fourth years. All the first year's work in the Day School will be offered as scheduled for the session 1917-18. Certain advanced courses will be given if the demand should exist.

### Evening Classes.

Evening classes in special business subjects are provided for those who are occupied during the day. These subjects are listed on page — of this catalog.

### The Junior and Senior Colleges.

This catalog schedules two years of work covering the requirements for graduation in the Junior College Division. Plans for the Senior College are already well advanced. The problems and needs of the city are being studied and business and professional men are being consulted in an effort to organize the work of the college so as to meet the demands. Complete four-year courses will be available for the Freshman class registering September, 1917. The Dean will be glad to discuss plans for subsequent years' work with students and assist them in their selection of a field for specialization.

## DAY COURSES IN THE JUNIOR COLLEGE.

### 1917-1918

#### General Business Administration.

##### First Year.

<b>Economics 311-312. Introduction to Economic Science.</b>	<b>6 hrs.</b>
Both Semesters, Mon., Wed., Fri., 9:05 A. M.	
<b>Business Administration 313. History of Commerce.</b>	<b>3 hrs.</b>
First Semester, Mon., Wed., Fri., 10:05 A. M.	
<b>Business Administration 314. Economic Resources.</b>	<b>3 hrs.</b>
Second Semester, Mon., Wed., Fri., 10:05 A. M.	
<b>Accounting 311-312. Elementary Accounting.</b>	<b>6 hrs.</b>
Both Semesters, Tues., Thur., Sat., 11:05 A. M.	
<b>Accounting 313. Business Mathematics.</b>	<b>2 hrs.</b>
First Semester, Tues., Thur., 9:05.	
<b>Electives. College of Arts and Sciences.</b>	<b>10 hrs.</b>
English 4 hrs., History 2 hrs., Political Science 2 hrs., Free Electives 2 hrs.	

##### Second Year.

<b>Business Administration 321. American Industry.</b>	<b>3 hrs.</b>
First Semester. (Time to be arranged.)	
<b>Business Administration 322. Business Organization and Management.</b>	<b>3 hrs.</b>
Second Semester. (Time to be arranged.)	
<b>Business Administration 323-324. Business Law.</b>	<b>4 hrs.</b>
Both Semesters. (Time to be arranged.)	
<b>Secretarial Administration 321. Business Correspondence.</b>	<b>2 hrs.</b>
First Semester. (Time to be arranged.)	

<b>Secretarial Administration 322.</b>	<b>Office Systems and practice.</b>	<b>2 hrs.</b>
	Second Semester. (Time to be arranged.)	
<b>Accounting 321-322.</b>	<b>General Accounting.</b>	<b>6 hrs.</b>
	Both Semesters. (Time to be arranged.)	
<b>Marketing 321.</b>	<b>Psychology of Business.</b>	<b>2 hrs.</b>
	Second Semester. (Time to be arranged.)	
<b>Political Science 141.</b>	<b>The Relation of Government to Business.</b>	<b>2 hrs.</b>
	First Semester.	
<b>Banking 321.</b>	<b>Money and Currency.</b>	<b>3 hrs.</b>
	First Semester. (Time to be arranged.)	
<b>Banking 322.</b>	<b>Banking and Credit.</b>	<b>3 hrs.</b>
	Second Semester. (Time to be arranged.)	

### ACCOUNTING.

#### First Year.

Identical with Course in General Business Administration.

#### Second Year.

Identical with Course in General Business Administration with following modifications:

Substitute for Political Science 141 and Marketing 321 the following:

<b>Accounting 331-332.</b>	<b>Advanced Accounting.</b>	<b>4 hrs.</b>
	Both Semesters. (Time to be arranged.)	

### BANKING.

#### First Year.

Identical with General Course in Business Administration.

#### Second Year.

Identical with Course in General Business Administration with following modifications:

Substitute the following Courses for Business Administration 321 and Marketing 321:

<b>Banking 323.</b>	<b>Insurance.</b>	<b>2 hrs.</b>
	(Time to be arranged.)	
<b>Banking 324.</b>	<b>Credits and Collections.</b>	<b>2 hrs.</b>
	Second Semester. (Time to be arranged.)	

### MARKETING.

#### First Year.

Identical with Course in General Business Administration.  
Second Year.

Identical with Course in General Business Administration with following modifications:

Substituting for Accounting 321, 322 the following:

Marketing 323.	Principles of Salesmanship.	3 hrs.
	First Semester. (Time to be arranged.)	
Marketing 324.	Principles of Advertising.	3 hrs.
	Second Semester. (Time to be arranged.)	

### SECRETARIAL ADMINISTRATION.

First Year.

Identical with General Course in Business Administration.

Second Year.

Identical with General Course in Business Administration with the following modifications:

Substitute for Political Science 141 and Marketing 321, the following:

Banking 323.	Insurance.	2 hrs.
	First Semester. (Time to be arranged.)	
Banking 324.	Credits and Collections.	2 hrs.
	Second Semester. (Time to be arranged.)	

### TRANSPORTATION.

First Year.

Identical with Courses in General Business Administration.

Second Year.

Identical with Courses in General Business Administration with following modifications:

Substitute for Marketing 321 and Banking 321, the following:

Transportation 321.	American Transportation System.	2 hrs.
	First Semester. (Time to be arranged.)	
Transportation 322.	Regulation of Common Carriers.	2 hrs.
	Second Semester. (Time to be arranged.)	

### EVENING COURSES.

First Semester

September

1917

Accounting 311.	Elements of Accounting.	2 hrs.
	Monday, 7-9 P. M.	
Accounting 321.	General Accounting.	2 hrs.
	Tuesday, 7-9 P. M.	
Accounting 331.	Advanced Accounting.	2½ hrs.
	Friday, 7-9:30 P. M.	
Banking 321.	Money and Currency.	2 hrs.
	Fitzgerald, Tuesday, 7-9 P. M.	
Marketing 321.	The Psychology of Business.	2 hrs.
	Mallory, Wednesday, 7-9 P. M.	

<b>Business Administration 323.</b>	<b>Business Law.</b>	2 hrs.
	Kibler, Thursday, 7-9 P. M.	
<b>Business Administration 335.</b>	<b>Corporation Finance.</b>	2 hrs.
	Fitzgerald, Friday, 7-9 P. M.	
<b>Economics 311.</b>	<b>Economic Problems.</b>	2 hrs.
	Kibler, Tuesday, 7-9 P. M.	
<b>Marketing 323.</b>	<b>Principles of Salesmanship.</b>	2 hrs.
	Mallary, Thursday, 7-9 P. M.	
<b>Banking 323.</b>	<b>Insurance.</b>	2 hrs.
	Fitzgerald, Thursday, 7-9 P. M.	
<b>Marketing 325.</b>	<b>Principles of Advertising.</b>	2 hrs.
	Mallary, Friday, 7-9 P. M.	
<b>Secretarial Administration 321.</b>	<b>Business Correspondence.</b>	2 hrs.
	Ingersoll, Wednesday, 7-9 P. M.	
<b>Transportation 331.</b>	<b>Traffic Geography and Traffic Movements.</b>	2 hrs.
	Kibler, Friday, 7-9 P. M.	
<b>Second Semester.</b>		
<b>Accounting 312.</b>	<b>Elements of Accounting.</b>	2 hrs.
	Monday, 7-9 P. M.	
<b>Accounting 322.</b>	<b>General Accounting.</b>	2 hrs.
<b>Accounting 332.</b>	<b>Advanced Accounting.</b>	2½ hrs.
	Friday, 7-9:30 P. M.	
<b>Banking 322.</b>	<b>Banking and Credit.</b>	2 hrs.
	Fitzgerald, Tuesday, 7-9 P. M.	
<b>Banking 326.</b>	<b>Customers' Use of a Bank.</b>	2 hrs.
	Fitzgerald, Friday, 7-9 P. M.	
<b>Banking 332.</b>	<b>Foreign Exchange.</b>	2 hrs.
	Fitzgerald, Thursday, 7-9 P. M.	
<b>Business Administration 336.</b>	<b>Industrial Management.</b>	2 hrs.
	Mallary, Wednesday, 7-9 P. M.	
<b>Business Administration 324.</b>	<b>Business Law.</b>	2 hrs.
	Kibler, Thursday, 7-9 P. M.	
<b>Economics 312.</b>	<b>Economic Principles.</b>	2 hrs.
	Kibler, Tuesday, 7-9 P. M.	
<b>Marketing 326.</b>	<b>Principles of Advertising.</b>	2 hrs.
	Mallary, Friday, 7-9 P. M.	
<b>Marketing 328.</b>	<b>Economics of Retailing.</b>	2 hrs.
	Mallary, Thursday, 7-9 P. M.	
<b>Secretarial Administration 322.</b>	<b>Office Systems and Practice.</b>	2 hrs.
	Ingersoll, Wed. 7-9 P. M.	
<b>Transportation 332.</b>	<b>Railway Regulation.</b>	2 hrs.
	Kibler, Friday, 7-9 P. M.	
<b>Transportation 334.</b>	<b>Traffic Management.</b>	2 hrs.
	Fitzgerald, Monday, 7-9 P. M.	



# The College of Industrial Science

## THE ADMINISTRATIVE BOARD.

1916-1917.

A. MONROE STOWE,  
*President of the University.*

FREDERICK H. EVANS,  
*Dean of the College.*

OSCAR W. IRVIN,  
*Faculty Representative.*

## THE FACULTY.

1916-1917.

A. MONROE STOWE, A. M., Ph. D. 908 Prospect Ave.  
*President of the University and Professor of Education.*

FREDERICK H. EVANS, B. M. E., M. E., 1817 Lawrence Ave.  
*Dean of the College of Industrial Science.*

B.M.E. 1903, M.E. 1906, Kentucky State College; 1903-4, Ironton Engine Co.; Summer 1905, Link Belt Machinery Co.; Summer 1906, Draftsman, Union Stock Yards Power Plant for Sargent & Lundy, Chicago; 1904-16 with Bradley Polytechnic Institute, Peoria, Ill., including Instructor in Mechanical Drawing (1909-1913); Superintendent of Day and Evening Vocational School (1913-1916); Superintendent of Summer Schools (1916); Acting Head of the Manual Arts Department (1915-1916); Dean of College of Industrial Science, Toledo University, 1916—

OSCAR W. IRVIN, B. S., 5 Norwood Apts. 19th Street.  
*Professor of Physics.*

B.S. 1910, State University of Kentucky; Graduate Student at State University of Kentucky, 1911-12; Instructor of Physics, Sayre Institute, Lexington, Kentucky, 1910; Assistant in Physics, Kentucky State University, 1910-12; Professor of Physics, Toledo University, 1912—

HENRY R. KREIDER, A. B., A. M., Ph. D. 41 Homewood Ave.  
*Professor of Chemistry.*

A.B. 1898, Franklin & Marshall; A.M. 1901, Franklin & Marshall; Ph.D. 1910, Johns Hopkins University; Professor of Natural Sciences, Pennsylvania State Forest Academy, Mont Alto, Pa., 1905-07; Professor of Chemistry, Baltimore Medical College, Baltimore, Md., 1910-13; Assistant Professor of Chemistry, Carleton College, Northfield, Minn., 1913-15; Professor of Chemistry, Toledo University, 1915—

ALEXANDER GWIAZDOWSKI-STARR, M. E., 555 Fernwood Ave.  
*Associate Professor of Mechanical Engineering.*

1906-08, Stevens Institute of Technology; 1909-1910, Columbia University, M. E.; Shops and Drawing-room, E. W. Bliss Co., Brooklyn, and R. Hoe & Co., New York, 1910-11; Designer, Locomobile Co., Bridgeport, Conn., 1911-12; checker, tool designer and designer of heavy machinery, Toledo, Cleveland and Alliance 1912-14; Associate Professor of Mechanical Engineering, Toledo University, 1914—

JOHN BRANDEBERRY, A. B., A. M., 127 W. Bancroft St.  
*Assistant Professor of Mathematics.*

B.S. 1913, Mount Union College, Alliance, Ohio; M.A. 1915, Ohio State University; Science Teacher, High School, Newberry, Michigan, 1913-14; Graduate Assistant in Mathematics, Ohio State University, 1914-15; Assistant Professor of Mathematics, Toledo University, 1915—

- A. NORMAN LAIRD, B. C. E., M. S., 927 Woodland Ave.  
*Instructor in Drawing and Civil Engineering.*  
 B.C.E. 1914; M.S. (in Engineering) 1916, University of Michigan; Assistant Instructor of Surveying, University of Michigan, 1914-16; Instructor in Civil Engineering, Toledo University, 1916—
- GLENN D. BRADLEY, A. B., A. M., Ph. D., 443 W. Bancroft St.  
*Assistant Professor of History and Acting Professor of English.*  
 A.B., University of Michigan, 1907; A.M., University of Michigan, 1913; Ph.D., University of Michigan, 1915; Head Department of History, Leavenworth, Kansas, High School, 1909-1910; Principal, Newton, Kansas, High School, 1910-1912; Instructor in English, University of Michigan, 1912-1914 and 1915-1916; Assistant in History, University of Michigan, 1914-1915; Assistant Professor of History and Acting Professor of English, Toledo University, 1916—
- J. R. EMERY, 121 21st St.  
*Part Time Instructor in Physics.*
- EMIL F. FREY, 2122 Michigan St.  
*Part Time Instructor in Mathematics.*
- JOHN M. REASON, B. S., 1216 City Boulevard  
*Part Time Instructor in Mathematics.*
- HAROLD R. SCHUTZ, 715 Hampton St.  
*Part Time Instructor in Physics.*
- RALPH M. SPRAGUE, A. B., 512 Platt St.  
*Part Time Instructor in Mathematics.*
- ARTHUR W. STUART, A. B., A. M., 1909 Jefferson Ave.  
*Part Time Instructor in Mathematics.*
- MATTHEW ADAMYTYS, 1020 Pinewood Ave.  
*Shop Assistant.*
- JOSEPH GWIAZDOWSKI, 743 Palmwood Ave.  
*Shop Assistant.*
- WACLAW GWIAZDOWSKI, 1020 Palmwood Ave.  
*Shop Assistant.*
- LEWIS HUEFNER, 1127 Woodland Ave.  
*Shop Assistant.*

## THE JUNIOR COLLEGE OF ENGINEERING DIVISION.

The Junior College of Engineering gives the boy who resides in Toledo a chance to obtain the first two years of a technical education without leaving the city.

The courses in the various branches, here outlined, parallel those given in the best technical schools of the country. When application is made to the Dean, the registration of students may be modified to meet requirements of senior engineering colleges which the students expect to attend.

## REQUIREMENTS FOR ADMISSION.

### By Certificate.

Students will be admitted upon presentation of a certificate from a recognized high school, evidencing the satisfactory completion of work represented by fifteen high school units.

Every candidate for admission must present the following:

Algebra,	1½ units.
Plane Geometry,	1 unit
Solid Geometry,	½ unit
Physics,	1 unit
History,	1 unit
English,	3 units
Foreign Language,	2 units

If these subjects are not covered by the certificate presented, examinations must be taken covering the required subjects. Students desiring admission by certificate should fill out the blank application form found in the back of this catalog and mail or bring the same to the Secretary of Toledo University, Eleventh & Illinois Sts., before Aug. 1st of the year in which they expect to attend.

### By Examination.

Examination will be given in September (see Calendar), covering the required subjects. Students desiring examinations should notify the Secretary of the University not later than August 1st.

Students may be admitted with conditions in one or two subjects with the exception that no conditions are allowed in Mathematics or Science. These conditions must be removed before the end of the first semester of the second year.

### PHYSICAL TRAINING.

Arrangements have been made with the Young Men's Christian Association whereby regular classes of University students are given systematic physical training. This work is required for all Junior Engineering students. Classes meet on Tuesdays from 2 to 4. Students who carry this work satisfactorily are entitled to all Y. M. C. A. privileges. The gymnasium fee is \$4.00 per semester.

### JUNIOR COLLEGE ENGINEERING DIPLOMA.

Upon satisfactory completion of two years of work in the Junior College of Engineering, a Junior College Engineering diploma will be given the student at the regular commencement exercises of the University. In order to obtain this diploma, the student must have removed all entrance conditions, and must have completed satisfactorily all required courses in the particular branch followed. Under no circumstances will a diploma be granted for partial or incomplete work.

### ANNOUNCEMENT OF COURSES, 1917-18.

#### Work Required in the First Year\*.

Work will be offered in four branches of Engineering—Chemical, Civil, Mechanical and Electrical. In the first year the required work is the same in all branches except Civil Engineering, and is as follows:

\* Civil Engineers are required to present Trigonometry for entrance and take C. E. 427-428 the first year.

		Credit Hours	
		1st Sem.	2nd Sem.
English 411-412.	English. W., F., 11:20-12:10.	2	2
Chemistry 111-112-113-114. Inorganic Chemistry and Qualitative Analysis.	Kreider, M., W., F., 8-8:50 A. M.; M., W., 1:10-3:55.	5	5
M. E. 411.	Engineering-Drawing. Evans, T., T., 8:00-9:45.	2	2

		Credit Hours	
		1st Sem.	2nd Sem.
Mathematics 411.	College Algebra. Brandeberry, M., W., F., 8:55-9:45.	3	0
Mathematics 412	Analytical Geometry. Brandeberry, M., T., W., T., F., 11:20-12:10.	0	5
Mathematics 413.	Plane Trigonometry. Brandeberry, T., T., 11:20-12:10.	2	0
Elective.	Modern Language. See Modern Language announcements under Arts College.	3	3
Physical Training.	A. and B. T., 2:05-3:45 P. M.	1	1
Work Required the Second Year.			
Chemical Engineering.			
C. E. 427.	Descriptive Geometry. Evans, M., W., F., 8:00-9:45.	3	0
<sup>1</sup> Chemistry 121-122-123-124.	Quantitative Analysis. Kreider, T., 11:20-12:10; T., T., 8:55-12.	4	4
<sup>1</sup> Mathematics 421-422.	Calculus. Brandeberry, M. T., (W., 8:00-8:50); T. F., 10:25-11:15.	5	5
<sup>1</sup> M. E. 425-426.	Mechanical Engineering Drawing. Starr, M., W., F., 8:05-9:45.	3	3
<sup>1</sup> Physics 421-422.	Mechanics and Electricity. Irvin, M., T., T., F., 8:55-9:45.	5	5
<sup>1</sup> Physics 423-424.	Laboratory. Irvin, W., 8:55-12.	1	1
Physical Training.	A2, B2. Tues., 2:05-3:45 P. M.	1	1
Civil Engineering.			
C. E. 421.	Surveying and Plotting. Laird, M., W., F., 1:10-5 P. M.	5	0
C. E. 422.	Topographical Surveying. Laird, T., T., 1:10-2; F., 1:10-5 P. M.	0	3
C. E. 424.	Railroad Surveying. Laird, M., W., 1:10-5.	0	4
C. E. 425-426.	Topographical Drawing. Laird, Thurs., 2:05-4.	1	1
Mathematics 421-422	Calculus. Brandeberry, M., T., (W., 8:00-8:50 A. M.); T., F., 10:25-11:15.	5	5
Physics 421-422.	Mechanics and Electricity. Irvin, M., T., T., F., 8:55-9:45.	5	5
Physics 423-424.	Laboratory. Irvin, W., 8:05-12.	1	1



		Credit Hours	
		1st Sem.	2nd Sem.
Physical Training.	A2, B2. Tues., 2:05-3:45 P. M.	1	1
C. E. 427-428.	Descriptive Geometry. (Offered for sophomores in 1917-18 only.) Evans, both semesters, M., W., 8:05-9:45.		
(Offered for Sophomores in 1917-18 only.)			
Elective Geology.	Laird.	Either Semester.	
Electrical and Mechanical Engineering.			
C. E. 427.	Descriptive Geometry. Evans, M., W., F., 8:00-9:45 A. M.	3	
M. E. 425-426.	M. E. Drawing. Starr, M., W., F., 8:05-9:45.	3	3
Mathematics 421-422.	Calculus. Brandeberry, M. T., (W., 8:00-8:50 A. M.); T., F., 10:25-11:15.	5	5
Physics 421-422.	Mechanics and Electricity. Irvin, M., T., W., T., F., 8:55-9:45.	5	5
Physics.	Physics Laboratory. Irvin, W., 8:55-12.	1	1
M. E. 427-428.	Woodworking and Patternmaking. Wed., P. M.	2	2
M. E. 429-430.	Machine Shop. Starr, Thurs., P. M.	2	2
Physical Training.	A2, B2. Tues., 2:05-3:45.	1	1
Elective C. E. 423.	Surveying and Plotting. Laird, 2 hours.	Either Semester.	

### EVENING INDUSTRIAL DIVISION CLASSES.

The purpose of these classes is to give men employed during the day an opportunity to get instruction that will benefit them in their trade.

It is the purpose of the College of Industrial Science to develop extension classes for any industry in which there is a legitimate demand for instruction.

Classes meet from 7:00 to 9:00 P. M. beginning September 12th or about October 1st, continuing for one year or for 20 weeks. The following courses are offered: Mathematics for Machinists, Mathematics for Electrical Workers, Blue Print Reading, the Use of Drawing Instruments, Elementary Mechanics, the Fundamentals of Electricity, Bench Work, Lathe Work, Milling Machine Work, Shop Theory, Gears and Gearing, Elementary Machine Design, Reinforced Concrete, Form Design, the Use of the Slide Rule, and the Use of the Carpenters' Square.

Students who make application after a course has begun will have their names placed on the waiting list and will be notified when there is an opportunity to enter. Students are admitted to these classes through application at the Dean's office.

Literature describing the extension classes will be available about August 1st. Those interested should give their names and addresses to Dean F. H. Evans.

# College of Law

## ADMINISTRATIVE BOARD.

1916-1917.

A. MONROE STOWE,  
*President of the University.*

AARON B. COHN,  
*Dean of the College.*

SOLON T. KLOTZ,  
*Faculty Representative.*

## THE FACULTY.

A. MONROE STOWE, Ph. D., <i>President of the University.</i>	908 Prospect Ave.
AARON B. COHN, LL. B., <i>Dean of the Law College and Instructor.</i>	1923 Linwood Ave.
JAMES AUSTIN, JR., A. M., <i>Instructor in Law.</i>	727 Oakwood Ave.
AMOS L. CONN, LL. B., <i>Instructor in Law.</i>	Perrysburg Road.
RALPH W. DOTY, A. B., J. D., <i>Instructor in Law.</i>	810 Madison Ave.
SHOLTO M. DOUGLAS, <i>Instructor in Law.</i>	2147 Putnam St.
ROBERT G. GOSLINE, <i>Instructor in Law.</i>	2505 Auburn Ave.
HARRY ISENBERG, A. B., LL. B., <i>Instructor in Law.</i>	330 Melrose Ave.
SOLON T. KLOTZ, <i>Instructor in Law.</i>	3130 Scottwood Ave.
GEORGE H. LEWIS, <i>Instructor in Law.</i>	16 Empire Apts.
HARRY E. THURSTON, Ph. B., LL. B., <i>Instructor in Law.</i>	409 Prescott St.

## REQUIREMENTS FOR ADMISSION AS REGULAR STUDENTS.

Certificates of graduation from one of the Toledo High Schools or from a high school with as high a standard of work and requirements for graduation, or evidence of equivalent work having been successfully accomplished, are required of candidates for admission as regular students.

## SPECIAL STUDENTS.

The entry of special students is not encouraged, but persons who are twenty years of age are allowed to become special students, and may

pursue a selected course of study, but without the privilege of being enrolled as candidates for a degree. Should such special student subsequently become a candidate for a degree he must pass all examinations required for admission at least one school year before the time when he proposes to graduate.

Such special students must also satisfy the Faculty that they are qualified to pursue the work with profit to themselves. All special students will be required to pursue and complete the courses selected, with the same thoroughness as regular students.

### ADMISSION TO ADVANCED STANDING.

Admission to advanced standing shall be upon examination. Information concerning requirements of candidates for such standing and concerning examination may be obtained from the Dean of the College of Law.

### CERTIFICATE OF ATTENDANCE.

A person having studied in the College of Law for a period not entitling him to be graduated, may, on application to the Dean of the College, receive an official certificate stating the time of his attendance and the subjects covered by his study.

### EXAMINATIONS.

The work of the College of Law shall be characterized by completeness and thoroughness. The aim is to fit students for the general practice of the law. The University year is divided in two terms, called semesters. At the end of each, a week is set apart for the thorough examination of all students upon the work of the semester. The examinations will be in writing and final as to the work of the semester. The right to take examinations as well as the privilege of continuing one's membership in the College at any time will be conditioned upon regular attendance at classes and the manner in which he passes such examinations. When a student neglects his work and does not conform to the requirements of the College, he may at any time during the year be dropped from the rolls.

### REQUIREMENTS FOR DEGREES.

No degree will be conferred upon any person who has not spent at least two full semesters in resident study in the Municipal College of Law of Toledo University.

### THE DEGREE OF BACHELOR OF LAWS.

Students who receive the full course of undergraduate instruction, viz.: 40 semester hours of required work and eight semester hours of elective work, perform all the required exercises, and pass all the regular examinations, are recommended for the degree of Bachelor of Laws.

### FEES AND EXPENSES.

A University registration fee of \$2 per semester is charged all University students who register during registration period. The fee is \$3 for late registration. The fee for tuition of full time students enrolled for eight hours of work per semester is forty dollars, the first half payable upon registration, the second half at the beginning of the second semester. The tuition fee of part time law students is \$2.50 per semester hour of work carried. These fees are to be paid to the Secretary of the University and must be paid at the opening of each half year. No student will be allowed to enter any University classes until after such payment has been made or satisfactory arrangements made with the Dean of the College for the payment of the fees. No portion

of the fees can be refunded to students leaving the University during the academic year. The Diploma Fee is five dollars.

Expenses. The textbooks used for class work cost on the average about \$30.00 a year. Ofttimes books, necessary for class work, can be rented for a nominal sum. Second-hand books can also be purchased.

## SCHEDULE OF COURSES.

1917-1918.

### Regular Classes in Four-Year Course.

Hour.	Day.	Freshman Class.	Sophomore Class.	Junior Class.	Senior Class.
7:10-9:00 P. M.	Monday.....	613-614	613-614	637-636	637-636
7:10-9:00 P. M.	Wednesday.....	615-616	615-616	633-634	633-634
7:10-9:00 P. M.	Friday.....	621-622	621-622	641-642	641-642

Law 635-655, a special class organized for those who desire to complete the requirements for the LL.B. degree in three years, will meet for organization, Friday, September 14, 1917, at 8:30 P. M., Room 112, University Building. At that time the class will decide upon a regular time for the meetings of the class.

## COLLEGE OF LAW.

1917-1918.

Law 613.	<b>Elementary Law.</b>	2 hrs.
	First Semester, M., 7:10-9 P. M.	
Law 614.	<b>Torts.</b>	2 hrs.
	Second Semester, M., 7:10-9 P. M.	
Law 615.	<b>Domestic Relations.</b>	2 hrs.
	First Semester, W., 7:10-9 P. M.	
Law 616.	<b>Partnership.</b>	2 hrs.
	Second Semester, W., 7:10-9 P. M.	
Law 621.	<b>Sales and Personal Property.</b>	2 hrs.
	First Semester, Fri., 7:10-9 P. M.	
Law 622.	<b>Agency.</b>	2 hrs.
	Second Semester, Fri., 7:10-9 P. M.	
Law 625.	<b>Criminal Law and Procedure.</b>	2 hrs.
	First Semester (time to be arranged).	
Law 626.	<b>Bailments and Carriers.</b>	2 hrs.
	Second Semester, M., 7:10-9 P. M.	
Law 633-634.	<b>Corporations.</b>	4 hrs.
	Both Semesters, W., 7:10-9 P. M.	
Law 637.	<b>Real Property (Advanced Course).</b>	2 hrs.
	First Semester, M., 7:10-9 P. M.	
Law 641.	<b>Damages.</b>	2 hrs.
	First Semester, Fri., 7:10-9 P. M.	
Law 642.	<b>Pleading.</b>	2 hrs.
	Second Semester, Fri., 7:10-9 P. M.	
Law 655.	<b>Private International Law.</b>	2 hrs.
	Second Semester (time to be arranged).	



## College of Pharmacy

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### ADMINISTRATIVE BOARD.

1916-1917.

A. MONROE STOWE,  
*President of the University.*

WILLIAM McK. REED,  
*Dean of the College.*

HENRY R. KREIDER,  
*Faculty Representative.*

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### THE FACULTY.

A. MONROE STOWE, Ph. D., 908 Prospect Ave.  
*President of the University.*

WILLIAM McKENDRIE REED, Ph. G., Ph. C., 419 West Central Ave.  
*Dean of the College and Professor of the  
Theory and Practice of Pharmacy.*

HENRY R. KREIDER, Ph. D., 2232 Franklin Ave.  
*Professor of Chemistry.*

PARK LINCOLN MYERS, M. D., 2201 Glenwood Ave.  
*Professor of Organic Chemistry.*

HAROLD S. COHN, M. D., 2046 Franklin Ave.  
*Lecturer in Physiology.*

ROY C. START, Ph. G., 2435 Warren St.  
*Instructor in Materia Medica.*

EVA ROBERTSON LISTON, Ph. G., Ph. C.,  
*Laboratory Assistant in Chemistry. Instructor in Pharmaceutical  
Botany and Pharmacognosy.*

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### ENTRANCE REQUIREMENTS.

For admission to the course leading to the Ph. G. diploma, the applicant must be at least 17 years of age and present a certificate showing the completion of two years' High School work of first grade Ohio, or an equivalent eight units pursued in an Academy High School or other educational institution.

For admission to the review course or preparatory to state examinations, the applicant is required to show evidence of ability to carry the work offered in this course, and enroll as a special student. No credits allowed in this course until preliminary requirements are complied with. Entrance certificate not required in this course.

All persons desiring admission to the College course leading to the Ph. G. diploma should send any and all credits of preliminary educational qualifications to the Entrance Examiner, Columbus, Ohio, care Secretary of the State Board of Pharmacy, before the opening of the school year and obtain an entrance certificate, by order of the State Board of Pharmacy relative to entrance qualifications for Colleges of Pharmacy.

## TUITION.

Ph. G. Course, school year of 34 weeks.....	\$60.00
Laboratory deposit, Ph. G. ....	10.00
Laboratory fee, Pharmacy Dept., Senior.....	2.00
Laboratory fee, Chem. Dept., Junior .....	2.00
Review Course of 32 weeks.....	60.00
Review Course of less than 32 weeks, per week.....	2.00

## THE WALDING, KINNAN &amp; MARVIN PRIZE.

The Walding, Kinnan & Marvin Company, wholesale druggists of Toledo, in order to encourage a deeper interest in, and a more thorough study of pharmacy and pharmaceutical work, offer a U. S. Dispensary in finest binding and latest edition to the senior student obtaining the highest percentage in pharmacy of the school year 1917-1918, the minimum to be 90 per cent.

## EXAMINATIONS.

Midwinter examinations will be held in first year Pharmacy, Chemistry, Botany, Materia Medica and Physiology. Also in the second year Microscopy and Organic Chemistry.

At the close of the year final examinations will be given in all branches. An average taken from these two examinations determines the standing of the student.

## THE COURSE OF STUDY.

Two grade courses of thirty-four weeks will be required to complete the course of study leading to the Ph. G. diploma.

The Junior work covers the first year's work in Pharmacy, Botany, Chemistry, Pharmacognosy, Histology, Physiology, and Latin. The Senior Course will be devoted to advanced work in Pharmacy, Organic Chemistry, Materia Medica, Microscopy, Toxicology, Pharmaceutical Jurisprudence, Commercial Pharmacy, etc. Extensive laboratory work will be required in both courses. The instruction will be by lectures, recitations, and laboratory exercise.

ANNOUNCEMENT OF COURSES TO BE OFFERED IN THE  
COLLEGE OF PHARMACY.

1917-1918.

Time of meeting of classes to be announced later.

Biology 701-702.	Physiology (Human).	
Biology 703.	Plant Histology	
Chemistry 701-702.	Elementary Chemistry (Lectures).	4 hrs.
Kreider, First and Second Semesters, Tues., Thurs., 8:55-9:45 A. M.		
Chemistry 703-704.	Elementary Chemistry (Laboratory).	4 hrs.
Kreider, First and Second Semesters, Tues., Thurs., 10:25-12:10.		
Chemistry 731-732.	Organic Chemistry.	4 hrs.
Meyers, both Semesters, Tues. and Thurs., 10:25-11:15.		
Latin 701.	Pharmaceutical Latin.	
Law 701.	Pharmaceutical Jurisprudence.	
Marketing 701.	Commercial Pharmacy.	

Pharmacy 701-702. Theory and Practice of Pharmacy.  
Reed.

Pharmaceutical Laboratory Work.  
Reed.

Pharmacy 703-704. Materia Medica.  
Start.

Pharmacy 705-707. Course of Botany and Pharmacognosy.  
Liston.

Vegetable Physiology.  
Liston.

Pharmacy 708-709. Theory and Practice of Pharmacy.  
Reed.

Pharmaceutical Laboratory Work.  
Reed.

Pharmacy 710. Toxicology.  
Liston.

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FORM OF APPLICATION FOR ADMISSION AS A REGULAR  
STUDENT.

.....  
Date

To the Secretary of Toledo University:

I hereby make application for admission into the.....  
College

of Toledo University as a regular student. In support of my application  
I submit the following information::

1. Place and date of birth.....
2. Name of father.....Place of birth.....
3. Occupation of father or guardian.....
4. Name of mother.....Place of birth.....
5. Date of graduation from grammar school.....
6. Secondary or high school attended.....  
School City
7. Date of graduation.....
8. Name of principal.....

Signature .....

Forward to Address.....

The University Secretary,  
University Building,  
Toledo, Ohio.









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